ALBERTA OIL SANDS ENVIRONMENTAL RESEARCH PROGRAM

Analysis of the Leisure Delivery System 1972-1979, With Projections for Future Servicing Requirements

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ALBERTA OIL SANDS ENVIRONMENTAL RESEARCH PROGRAM

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These research reports describe the results of investigations funded under the Alberta Oil Sands Environmental Research Program. This program was designed to direct and co-ordinate research projects concerned with the environmental effects of development of the Athabasca Oil Sands in Alberta.

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Analysis of the Leisure Delivery System

1972-1979,

with Projections for Future Servicing Requirements

Project HS 50.4

AOSERP Report 103

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The Hon. J.W. (Jack) Cookson
Minister of the Environment
222 Legislative Building
Edmonton, Alberta

Sir:

Enclosed is the report "Analysis of the Leisure Delivery System 1972-1979, with Projections for Future Servicing Requirements".

This report was prepared for the Alberta Oil Sands Environmental Research Program, through its Human System, under the Canada-Alberta Agreement of February 1975 (amended September 1977).

Respectfully,

W. Solodzuk, P.Eng.
Chairman, Steering Committee, AOSERP
Deputy Minister, Alberta Environment

ANALYSIS OF THE LEISURE DELIVERY SYSTEM 1972-1979, WITH PROJECTIONS FOR FUTURE SERVICING REQUIREMENTS

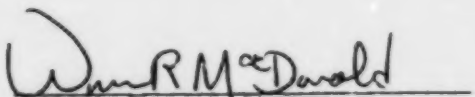
DESCRIPTIVE SUMMARY

The increase in the population of Fort McMurray, which since the early 1960's has been associated with commercial exploitation of the Athabasca Oil Sands, has necessitated the institution and continuous expansion of recreational and cultural service delivery systems in the region. In 1979, government departments represented on the Human System Scientific Advisory Committee noted that little was known about the evolution and timing of the delivery of the leisure services in relation to the oil sands development activities. At the same time, recreation was being considered as part of the General Municipal Plan for Fort McMurray, while the Northeast Alberta Regional Commission was conducting a study of the non-intensive use of recreational resources in the region. Also, the Recreation Director and the Recreation and Culture Advisory Board intended to develop a Master Plan for Fort McMurray. In the above context, a research project was required to provide additional information which would establish the baselines; assess the supply/demand dynamics related to recreational and cultural services in the region since 1972; and develop projections which would aid in the timing and coordination of the delivery of these services concurrent with future oil sands developments.

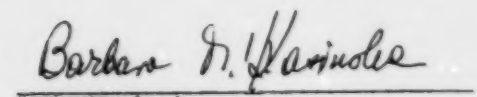
The report entitled "Analysis of the Leisure Delivery System: 1972 - 1979, with Projections for Future Servicing Requirements" was prepared by MTB Consultants Ltd. In this study, leisure was defined as the activities or occupations undertaken in the surplus of time remaining after the practical necessities of life have been attended to. Leisure services were defined to be the formal structures whose primary functions are to develop, provide, and organize leisure opportunities and activities.

The study methodology involved reviewing three inventory years: 1972, 1976, and 1979. This review served to assess the ability of the leisure delivery system to respond to both rapid growth and changes in demographic structure. By relating the social and environmental variables to the leisure services available, it was possible to ascertain the adequacy of servicing and problems associated with the provision of leisure services in Fort McMurray. On this basis, it was then possible to suggest the level of servicing required in the future (to 1986). Standards specific to the Fort McMurray situation were developed. These were applied to the growth projections for Fort McMurray and the New Town proposed to be built north of Fort McMurray, to indicate levels of leisure servicing required in the future. As a result of the methodology adopted by the authors, this report provides valuable information on the evolution of the leisure delivery system in the region.

The report has been recommended for wide distribution. The Alberta Oil Sands Environmental Research Program thanks MTB Consultants Ltd. for their effort and contribution.



W.R. MacDonald, Ph.D
Director (1980-81)
Alberta Oil Sands Environmental
Research Program



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101-06636/

ANALYSIS OF THE LEISURE DELIVERY SYSTEM 1972 - 1979, WITH PROJECTIONS FOR FUTURE SERVICING REQUIREMENTS

by

MTB CONSULTANTS LIMITED

EDMONTON, ALBERTA

for

ALBERTA OIL SANDS

ENVIRONMENTAL RESEARCH PROGRAM

Project HS 50.4

September 1980

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ABSTRACT

The purpose of this study was to assess the development of the Leisure Delivery System in the AOSERP study area between 1972 to 1979 and project leisure program and facility requirements into the future. By necessity, the study focused on Fort McMurray, the only urban centre in the AOSERP area large enough to supply a wide range of leisure services. Data for the study came from personal contacts, literature searchers, and primary data generated by a University of Western Ontario research project.

It was found the growth resulting from oil sands development occurred so quickly that the leisure delivery system could not keep pace. From supplies barely adequate to meet the demand of a community of 9000 in 1972, these facilities were forced to accommodate a fast growth rate in the next seven years.

To project future leisure requirements, standards were developed which were specific to the Fort McMurray situation. These encompassed both facilities and open space and were further broken down by community wide and neighbourhood requirements. Specific neighbourhood standards were required to overcome the physical barriers which separate the residential areas. Finally, the Fort McMurray standards were applied to a possible New Town development to project leisure facility and open space requirements in the future.

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Special mention and thanks also to the staff at MTB Consultants who worked diligently on this study. They include principal authors Russ Foster and Shirely Rozzen; researchers Colin Jeffares, Melissa Chakravorty, and Mark Schwartz; and typists Marylin Barron and Rita Seib. We are also indebted to Mr. Don Barron, Principal of MTB Consultants for his support during the duration of this project.

1. INTRODUCTION

MTB Consultants was commissioned to prepared this report, "A Study of the Leisure Delivery System in the AOSERP Study Area Since 1972," by the Alberta Oil Sands Environmental Research Program (AOSERP). The study investigates the relationships between rapid economic growth and population increase, and the development of recreation and cultural services in the AOSERP study area since 1972. As outlined in the Terms of Reference, the objectives of this study are:

1. To inventory and analyze the development and timing of networks and facilities for the development of recreation and cultural services by both public and private agencies in the Athabasca Oil Sands region since 1972;
2. To project the requirements for those services in relation to growth scenarios furnished by the Northeast Alberta Regional Commission; and
3. To provide an information base which will help interested agencies to plan and coordinate the devliery of recreation and cultural services during subsequent oil sands development.

1.1 DEFINITION OF LEISURE

A single definition will not adequately explain the meaning of leisure. Leisure has been conceptualized in three basic contexts: time, activities, or a state of mind. Each of these emphasizes a particular aspect of the term (Godbey 1978).

Leisure, as a state of mind, is a mental and spiritual attitude. "It is, in the first place, an attitude of the mind, a condition of the soul" (Pieper 1952). A contrasting view of leisure, the discretionary time concept, conceives of leisure as that portion of time which remains when time for work and the basic requirements for existence have been satisfied (Murphy 1975). Nakhooda (1961) similarly defined leisure as, "the state of being free of everyday necessity".

A definition of leisure as activity states that leisure consists of a number of occupations in which the individual may indulge of his own free will either to rest, to amuse himself, to add to his knowledge, to improve his skills disinterestedly, or to increase his voluntary participation in the life of the community after discharging his professional, family, and social duties (Dumazedier 1960).

This report will employ a combination of the latter two definitions. Leisure will be regarded as the activities or occupations undertaken in the surplus of time remaining after the practical necessities of life have been attended to. Based on this definition, the term leisure services will be used henceforth to denote both recreation and cultural services.

1.2 LEISURE SERVICES

While leisure activities are "freely" chosen, leisure service organizations, public, private, and commercial, exert an influence on potential participants by shaping the choices of leisure activities to which they have access, the environment in which they take place, and the qualitative aspects of such activity (Godbey 1978). Leisure services are the formal structures whose primary function is to develop, provide, and organize leisure opportunities and activities.

1.3 METHODOLOGY

A four-phase methodology was employed in this study. Each of the phases are reviewed below.

1.3.1 Inventory

The inventory, the preliminary step in the analysis of leisure delivery systems, consisted of reviewing and preparing information from four data sources.

1.3.1.1 Government documents and reports. A detailed review of documented sources of information was undertaken. Three areas were investigated: official Government reports; file documents from the Fort McMurray Recreation Department; and census data. Resource documents used in the study are reviewed within Appendix 9.1.

Problems were encountered with the file documents. It was anticipated that information on programs and participation rates would have been recorded for the 1972 to 1979 period. Upon reviewing the files, it became apparent that no detailed records existed prior to 1976.

1.3.1.2 Personal interviews. In an attempt to fill the gaps in the document sources noted earlier, and to enhance our knowledge of the leisure system in Fort McMurray, numerous interviews were conducted (see Appendix 9.2 for a listing of those interviewed). The interviews were particularly useful in clarifying relationships between various agencies, and providing insights on recent occurrences. However, the interviews did little to fill the pre-1976 information gap. It was found that the majority of those involved with leisure services in Fort McMurray had lived in the town only since 1976/1977. Therefore, the pre-1976 gap could not be filled completely through the interview process.

1.3.1.3 Interest group submissions. To ensure that the recommendations of this report respond adequately to the needs of the many service groups who offer leisure programs, a request for submissions was put out to 65 groups. Sixteen of the 65 community groups surveyed responded to the request for written submissions, resulting in a response rate of 25%. The request asked for information on membership data, space requirements, and special programs the group may be involved in. This information is important to the development of standards which are responsive to the Fort McMurray situation (see Section 9.3).

1.3.1.4 Preference and participation data. To assist in developing standards which will guide the provision of leisure facilities in Fort McMurray, access to preference data is of the utmost importance. While data of this nature were not generated by the study team, they were available through the University of Western Ontario. Additional data were also made available through AOSERP's "Study of Human Adjustment in the Fort McMurray Area". As a result, it was possible to include these data in the analysis of standards.

1.3.2 Open Space Inventory

At the time the study was commissioned, no open space inventory existed for Fort McMurray. To assess the town's open space needs in the future it was necessary to complete such an inventory. Utilizing October 1979 aerial photography, six different classes of open space were identified and mapped.

1.3.3 Analysis of the Leisure Delivery System, 1972 to 1979

This preliminary analysis concerns itself with the development and morphology of the Fort McMurray leisure delivery system since 1972. The main purpose of this analysis is to understand whether the delivery system responds directly to the various phases of oil sands development (construction and operations); or whether the delivery system has developed in response to variables which intervene between the actual resource development phases and the leisure delivery system.

Effort is concentrated on searching for relationships between demographic data changes in the delivery system. By looking at these relationships, it is possible to understand if the leisure system reacted directly to oil sands development (as reflected in the demographic data). If intervening variables appear to determine the form of the leisure delivery system, these will be identified and discussed.

1.3.4 Rejection of the Input/Output Methodology

At the proposed stage, the original intent was to operationalize a descriptive model into an input/output format to predict the supply of services required in the future. The model required input on the growth scenario for Fort McMurray and quantified standards developed specifically for the town, in order to predict the quantity and type of leisure services required in the area. It was proposed that three sources of information be used to develop the quantified standards:

1. Inventory data from Phase I;
2. Closely coordinated input from local people who have been involved in the delivery of leisure services in the area; and
3. Input from the general community.

An exhaustive review of inventory data resulted in dropping the input/output model from use in this study. This decision was made for the following reasons:

1. Data for the 1972 and 1976 inventory years are not as complete as those for 1979. Therefore, statistical comparison between inventory years was not possible.
2. The development of the input/output model was predicated on some quantifiable pattern emerging in the relationship between population growth and dynamics, and the growth in the leisure delivery system. The findings of this study, due both to lack of data and actual lack of correlation between the variables, indicated that no such clear-cut relationships existed. Therefore, employing a model built on these types of relationships was meaningless.

1.3.5 Predicting the Level of Supply for Leisure Services

A new methodology was adopted to predict future supply. A set of standards, sensitive to the Fort McMurray situation, was generated from three sources:

1. The 1979 Municipal Census;
2. Recreation preference data generated by Gary Holman of the University of Western Ontario; and
3. A review of the use of standards and guidelines in other cities and towns in Canada was conducted.

The standards were developed to meet the special conditions prevalent in Fort McMurray. By applying the standards to the growth scenarios supplied by the Northeast Commissioner's Office and the Planning Department of the New Town of Fort McMurray, an indication of magnitude of supply required was produced. This, in turn, was modified by a set of geographical criteria (spatial distribution of the neighbourhoods, access and ease of interaction within the community, and availability of open space), so that the final supply figure was responsive to the urban form in Fort McMurray. By applying these standards to possible new town development related to the Alsands project, indications of service requirements were also produced.

1.3.6 Process Review

The study will be concluded with a review of the methodology. Allowing oneself the luxury of hindsite provides the opportunity to reveal areas where methodological problems arose due to problems with data or other external sources.

1.4 LEISURE SERVICES AND RESOURCE TOWNS

Resource towns are usually either "company" towns, where the economic base of the community is dependent upon a single activity or, as in the case of Fort McMurray, are towns which are dependent on the exploitation of a single resource. The characteristics of resource towns create a special need for the provision of community services, especially leisure services. A general review follows, noting some of the more significant variables which impact on the provision of leisure services in the resource towns.

1.4.1 Physical Setting

The physical base can play a significant role in life style and perceived service needs. Towns dependent on extraction or utilization of a natural resource usually are located in isolated areas, far removed from large urban centres. Transportation and communication routes are often lacking, lending a greater sense of isolation to the physical remoteness. Lack of better access to the south is an often-heard complaint of residents of northern Canadian resource towns (Matthiasson 1970). This feeling of isolation is enhanced further by an "end of the road" syndrome. Although the surrounding areas may offer a multitude of recreational opportunities, the absence of a neighbouring community (i.e., "end of the road") increases the feeling of isolation.

Climatic factors also may impose a need for special leisure service planning. For instance, adequate indoor recreation facilities are essential in a town such as Fort McMurray because of the cold, inclement winters, long hours of darkness, and short summer seasons. Moreover, leisure programming must reflect the long winter season by offering opportunities to develop skills like cross-country skiing and snowshoeing. Innovative leisure programming is necessary to emphasize the range of recreation and cultural opportunities which are possible given the climatic constraints.

1.4.2 Demographic Characteristics

The unique demographic characteristics of resource towns must be considered the dominant factor in leisure service provision. For example, young, single males form the base of the workforce in the early development stages of resource towns. Obviously their recreational and cultural needs differ from other age groups. This initial workforce is of a transient nature, thereby creating an attitude of impermanence which complicates leisure service planning and provision.

As the communities mature, the demographic profile changes; this is a result of changes in the composition of the workforce.

Initially, one expects an over-representation of single males in the population profile during the initial construction phase. As the community moves into servicing operational needs of the economic activity, young families dominate the profile. This is reflected in the large proportion of children under four years of age. The tendency, as the community matures, is for the profile to begin resembling the characteristics of the entire province.

Recreational and cultural priorities therefore change in accordance with this re-distribution of population. In Fort McMurray, the problem of service supply is complicated by the imposition of a construction workforce (young, single males) on a stabilized operational labour force (families). This is dealt with in greater detail in Section 2.4.

1.4.3 Leisure Priorities in Resource Towns

A young, mobile population and environmentally imposed limitations, project a real need for well-planned and satisfying leisure services. Matthiasson (1970) in a survey of resource towns, including Fort McMurray, found that, with regard to the need in resource communities for a variety of services and facilities, the highest priority was given to entertainment and recreation. Matthiasson (1970) indicated that the average resident of a northern resource community, generalizing from a Fort McMurray sample, feels that his or her wants are most satisfied if entertainment facilities are available, income is high, housing is good, and the opportunities to visit the urban centres of the south are adequate.

1.5 LEISURE SERVICES AND THE ALBERTA OIL SANDS ENVIRONMENTAL RESEARCH PROGRAM

The analysis of the leisure delivery system is only one of a number of diverse projects currently being conducted by AOSERP's Human System. Therefore, the relationship which exists between this study and other Human System research should be made explicit. This ensures that this study is not perceived as being developed in isolation from other social research in the oil sands area.

A useful tool for tying leisure services into a broader social research context is the "Conceptual Model for Study Impacts of Oil Sands Development in the Fort McMurray Area" (AOSERP 1979). This study presents a planning/policy framework to provide a set of reference points for the comparison and analysis of information requirements (AOSERP 1979:23).

The framework has broken down socio-economic impact into five major dimensions (AOSERP 1979:26) including:

1. Population;
2. Employment;
3. Housing;
4. Social Services; and
5. Physical Services and Regional Infrastructure.

Leisure services fall directly under the social services heading yet also draw strongly from population, employment, and housing studies.

The framework goes on to break the development process in the oil sands area into a four stage description: exploration, development, operational, and post operational (AOSERP 1979:29). This framework is most useful as it allows for at least a qualitative comparison of data generated from diverse studies based upon the four development stages.

In this study, a similar taxonomy was employed. The exploration period was not of concern here, however, the development stage has been more specifically referred to as a construction phase. The post operational phase is more loosely referred to as periods of stability within this report. Although slightly different terminology has been employed, the four-part breakdown allows the development of leisure delivery systems to be tied directly to the morphology of oil sands development during the 1972 to 1979 period.

The conceptual framework document also points out the need to "attempt to project certain patterns into the future" (AOSERP 1979:26). Section 1.5.5 indicated that one of the goals of this study is to

predict the level of supply of leisure services required in the future. In undertaking this task, one of the perceived necessities for oil sands social research projects is being fulfilled.

1.6 REPORT ORGANIZATION

The remainder of this report is broken into six main sections. The first introduces the reader to the physical, social, and economic variables in Fort McMurray which have impact upon the provision of leisure services. This is followed by an inventory section, which is subsequently analyzed in a following section. Section 5 will deal with the formulation of standards sensitive to Fort McMurray, while Section 6 is the application of standards to predict future supply of recreation services. Section 7 includes both process review and concluding remarks.

2. CONDITIONS AFFECTING LEISURE SERVICE DEVELOPMENT IN FORT MCMURRAY AND THE AOSERP STUDY AREA

The purpose of this section is to familiarize the reader with physical, historical, and demographic variables which may affect recreational development in the AOSERP study area, and Fort McMurray in particular.

2.1 LOCATION

The study area boundary extends westward from the Alberta-Saskatchewan border to its farthest extent at 114° West Longitude, and southward from the Alberta-Northwest Territories demarcation to 56° North Latitude. It emcompasses an area of approximately 64000 km² (see Figure 1).

Fort McMurray is located in the southern sector of the study area at the confluence of the Athabasca and Clearwater rivers, 455 km from Edmonton via Highway 63. Regularly scheduled access to the town is provided by air, rail, and bus transportation.

There are three incorporated communities within the region; Anzac, Fort Chipewyan, and Fort MacKay. Population is less than 200 in both Anzac and Fort MacKay, but exceeds 1100 residents in Fort Chipewyan. The regional population is dispersed and very small in comparison with the large urban concentration in Fort McMurray (see Table 1).

2.2 HISTORY

Fort McMurray has experienced several boom periods functioning as a fur trading post, a lumbering centre, and a trans-shipment point before its emergence as a service centre for the oil sands extraction industry.

Although fur trade activity had flourished in the region since the exploration of Hearne and Pond, a century elapsed before Fort McMurray was established by H.J. Moberly in 1870. Then, in 1921, the town's transportation function increased as it became the terminus of the Alberta Waterways Railway and break-of-bulk point for goods transported into the MacKenzie River system.

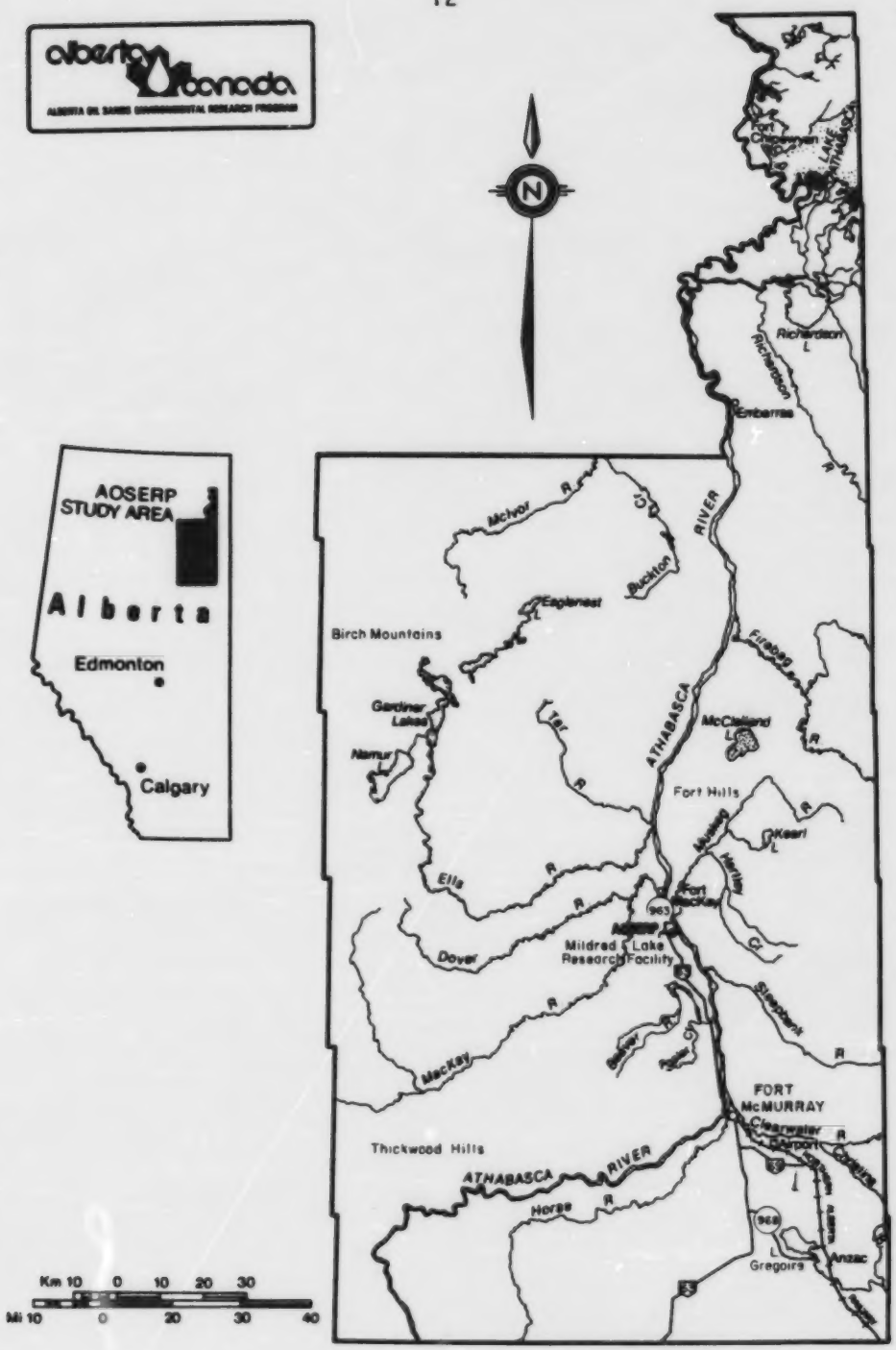

Figure 1. Map of the AOSERP study area.

Table 1. Population of the AOSERP study area, 1961 - 1978 (P.C. Nichols and Associates 1979).[a]

	1961	1966	1971	1976	1978	1979
Fort McMurray	1 186	2 614	6 847	15 321	24 580	27 000[d]
Unincorporated communities:						
Anzac	154	224	114	138	ND	
Fort Chipewyan	717	1 026	1 122	1 179	ND	
Fort McKay	187	230	200	166	ND	
	1 058	1 480	1 436	1 483	1 600[c]	
Remainder of area[b]	400	200	300	300	300[c]	
TOTAL	2 644	4 294	8 583	17 104	26 480	27 000

[a] Sources: Bureau of Statistics (n.d.); Department of Municipal Affairs. New Town of Fort McMurray: municipal census (1978); and Dominion Bureau of Statistics: Census of Canada (1961, 1966, 1971, 1977).

[b] For years 1961, 1966, 1971, 1976, estimated from census population figures for relevant enumeration areas.

[c] Estimated.

[d] 1979 population as estimated by the New Town of Fort McMurray Planning Team.

A series of experimental plants, in the late 1920's at Waterways, and during the period 1945 to 1951 at Bitumount, sought to refine techniques for economically extracting oil from the sands. The improvement of the extracting process stimulated leasing activity in 1953 which continued until 1960.

With the construction of the Great Canadian Oil Sands (GCOS)[1] plant, 1963 to 1967, the Town of Fort McMurray experienced its first great influx of industrial workers, increasing its population from 1200 to approximately 5000 during the four-year period. A relatively stable period followed, but in 1974 construction of the Syncrude Plant, adjacent to the GCOS operation 48 km north of Fort McMurray, sparked another massive immigration. At its peak, Syncrude employed in excess of 7000 workers at the plant site. Syncrude became operative in 1978.

Presently the AOSERP region is in an operational phase of its growth cycle. However, with the recent approval of the Alsands Limited development application, a renewed flurry of construction should characterize the early 1980's. The implications of another significant increase in population must be identified and priorities established to meet the anticipated demand for leisure services. Prior to this analysis, a series of inventories must be developed in order to establish the current status and baseline conditions of leisure services in the AOSERP study area. The first of these briefly describes the natural chracteristics of the region.

2.3 PHYSICAL FEATURES

This brief review of the historical and environmental resources of the Athabasca Oil Sands region serves to outline the physical framework within which leisure services must develop. The provision of facilities and programs in urban areas can overcome many physical limitations, but it is important to align some

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[1] *GCOS amalgamated with Sun Oil Company in August 1979, after the completion of the report, to become Suncor, Inc.*

aspects of urban oriented leisure services (i.e., boating, hiking, cross-country skiing) to the available physical resources of the region. Thus an understanding of these regional sources is necessary in an inventory of this nature.

2.3.1 Topography

The region consists of a level plain sloping toward Lake Athabasca, punctuated by a series of upland areas and river valleys. The Birch Mountains rise above the plain to the north and west of Fort McMurray, while the Thickwood Hills and Stony Uplands lie to the west and south. Birch Mountain is the highest point of elevation (850 m) in the region. One unique topographical feature is an area of active sand dunes located near Richardson Lake.

2.3.2 Drainage

The study area lies within the Athabasca drainage basin with the Athabasca and Clearwater rivers being the two primary water courses. The characteristics of the two rivers allow for recreational boating and water activities on selected reaches. The Clearwater is used presently by boating enthusiasts, a fact recognized by the Alberta Forestry Service which has established four primitive camping areas along the river. The lower Athabasca, a distance of 225 km to the Lake Athabasca delta, also is utilized by recreational boaters. Its channels are well marked, a result of the considerable river traffic that once travelled the Athabasca. Major tributaries to these two main rivers include the Christina, Steepbank, MacKay, Ells, Firebag, and Richardson rivers.

There are portions of the study area which are poorly drained. These vast tracts of muskeg inhibit even recreation development. It is possible that some areas, especially those under lease for oil sands extraction, could be utilized for off-road recreational vehicles on a short-term basis.

2.3.3 Lakes

A small number of lakes in the study area offer recreational potential. Gregoire Lake is presently the site of a Provincial Park, and Gypsy and Birch lakes are potential development areas, especially in view of their proximity to Fort McMurray. The potential of Namur-Gardiner Lakes is limited as access and lake development capability are restricted. Lake Athabasca, for reasons of size, climatic hazards, and distance from major population areas, also has limited recreation potential.

Presently, the accessible lake facilities are heavily over-used,[1] as lack of access results in a concentration of water based activities. "Only with the development of access routes can the clear lakes and sandy beaches of the Precambrian Shield be integrated into the supply of outdoor recreation facilities." (Alberta Forestry Service 1978).

2.3.4 Vegetation

Four major tree species dominate the area: white spruce in the upland areas; aspen and balsam poplar in the lowlands; jack pine and lodgepole pine in sandy areas; and black spruce and tamarack in muskeg areas. White birch is scattered throughout the entire region. Extensive tree growth has been restricted by poor drainage and fire damage in widespread areas of the region.

2.3.5 Fish and Wildlife

Sport fish species found in the study area are: yellow walleye *(Stizostedion vitreum vitreum)*, northern pike *(Esox lucuis)*, Arctic grayling *(Thymallus arcticus)*, and mountain whitefish *(Prosopium williamsoni)*. Reaches of several rivers and streams have been designated as Class I or Class II fishing areas. Among these are the Athabasca, Firebag, and Ells rivers. Several lakes

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[1] *Personal contact with Mr. Barry Manchak, Alberta Recreation and Parks, Provincial Parks Division.*

in the region are also classified as good fishing. The best of these appears to be Namur Lake. Lake Athabasca has supported a commercial fishery in the past.

Wildlife species include ungulates such as moose, mule deer, white-tailed deer, woodland caribou, and refugee bison from Wood Buffalo National Park; fur bearers such as beaver, mink, muskrat, lynx, fox, wolf, marten, and bear; waterfowl such as ducks, pelicans, cranes, swans, and herons; and upland fowl such as grouse and partridge. The wildlife resource of the study area offers good potential for recreational hunting.

2.3.6 Climate

The climate of the AOSERP study area is characterized by long, cold winters, and short but relatively warm summers. Mean daily temperature is 21.5°C in July (Environment Canada 1940 to 1970). The topography of the region facilitates the creation of temperature inversions. Cold air is trapped within the valleys by warmer air at higher altitudes, thus lowering the temperature at lower elevations.

Total precipitation in the region is 435 mm of which 300 mm fall as rain and 135 mm as snow. Average wind speed in both July and January is approximately 8.91 km. Wind direction is predominantly from the southwest in July, and from the east in January.

In the following sections the climatic factors identified above which affect the provision of leisure services are taken into account in the determination of standards to guide future development of recreation and cultural services.

2.4 POPULATION GROWTH AND STRUCTURE 1971 to 1979

The total population of Fort McMurray has risen by 357% between 1971 and 1978 (6847 to 24 580, see Table 2). It is estimated that the 1979 population of the town will exceed 27 000.[1]

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[1] *Personal contact with the New Town of Fort McMurray Planning Team.*

Table 2. Fort McMurray population, 1971 to 1979[a].

YEAR	POPULATION	PERCENTAGE INCREASE
1971	6 847	
1972	7 147	4
1973	8 148	14
1974	9 542	17
1975	13 393	40
1976	15 321	14
1977	20 340	32
1978	24 580	21
1979	27 000[b]	12

[a] Source: Alberta. Department of Municipal Affairs.
New Town of Fort McMurray
Municipal Census for each year, 1971 - 1978

[b] Estimates supplied by the New Town of Fort McMurray, Planning Team.

During the period 1971 to 1974, the town's population increased by 2695 persons. With the start of construction of the Syncrude plant in 1974, the population jumped by approximately 4000, an increase of 40% in one year. During the construction phase of Syncrude, 1974 to 1978, the annual growth rate of the town remained in excess of 30%. The total population of the town rose from 9542 in 1974 to 24 580 in 1978. The rapid growth rate is well illustrated by the demographic statistics for 1976. In that year, two census were undertaken. In June, the Federal Census recorded a population of 15 425 and, in October, the Municipal Census enumerated 17 550 residents. In less than four months it appears that the population increased by more than 2000, a growth rate of 15% in four months of that year.[1] The implications of this extremely intense growth rate, in terms of service and facility supply, are tremendous. Not only are new services unable to keep pace with inmigration, but existing facilities (i.e., housing and retailing) are strained to capacity.

In the majority of surveys conducted prior to, or during oil sands development, the population projections have under-estimated the labour force requirements and thus the total population. For example, Reid, Crowther (1973) estimated a population in 1979 in the range of 15 500. This was surpassed in 1976 at only the mid-way point of Syncrude construction. As mentioned previously, the 1979 population is thought to exceed 27 000 residents. The inability to correctly assess the population influx has hampered leisure service planning.

During the past two-year period, the growth rate has slowed to approximately 20% per annum. The prospect of a new town development, 80 km north of Fort McMurray, may reduce the population pressures on Fort McMurray although approval of expansion plans for

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[1] *It is important to note that the Alberta Bureau of Statistics (ABS) has suggested that the June 1976 Federal census and the October 1975 Municipal census are not comparable since enumeration methods differ. Municipalities always over-estimate and the Federal census always under-estimates.*

both GCOS and Syncrude may negate the effects of the new town. Therefore, regardless of location, the regional population will continue to grow at a substantial rate making it necessary to periodically re-evaluate the supply of leisure services.

2.4.1 Age-Sex Structures

The 1971 age-sex breakdown of Fort McMurray (Table 3) showed a high percentage of children, zero to four years of age (16.1%), and an even greater percentage in the 25 to 34 age grouping (18.9%). This represents a fairly typical population distribution characteristic of resource towns. It differs from the Alberta norm in that both these categories are overrepresented while older age groupings are considerably underrepresented.

In 1976 the Syncrude plant was midway through its construction phase offering employment to more than 7000 persons; a majority of which were young, single adults aged 20 to 34. This phase continued through to 1978 and its effects on the demographic profile of Fort McMurray are evident when data from the 1971 (pre-construction) and 1976 (Figure 2), 1977, and 1978 (construction phase, Figure 3) age groups are compared. Between 1971 and 1978 the 25 to 34 year age group increased by six percent and the 20 to 34 age group increased by 3.4%. In all other age groupings the percentage increases during this period are comparatively small and in some instances a decline in relative numbers is evident.[1]

It is anticipated that these present trends would change if no future development were to take place. The age-sex distribution of the Fort McMurray population would resemble more closely that of the Alberta population if a normal growth scenario was to continue (see Figure 4). However, with the development of the Alsands project and its side effects on Fort McMurray, and possible expansion of the GCOS and Syncrude plants, the 25 to 34 year age group should

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[1] *This decline may be a result of the different enumeration methods in Federal and Municipal census.*

Table 3. Fort McMurray, population by age groups 1971 to 1979.

AGE / YEAR	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-69	70+	TOTAL
1971	1105 (16.1)	1055 (15.4)	795 (11.6)	585 (8.5)	675 (9.8)	1300 (18.9)	715 (10.4)	375 (5.4)	170 (2.4)	40 (0.5)	50[c] (0.7)	6847
1976[a]	2030 (13.1)	1930 (12.5)	1600 (10.3)	1375 (8.9)	1900 (12.3)	3430 (22.2)	1750 (11.3)	870 (5.6)	395 (2.5)	60 (0.3)	65[c] (0.4)	15425
1977[b]	2465 (12.1)	2545 (12.5)	1975 (9.7)	1690 (8.3)	2750 (13.5)	5030 (24.7)	2320 (11.4)	1080 (5.3)	405 (2.0)	40 (0.2)	40[d] (0.2)	20373
1978[b]	2875 (11.7)	3025 (12.3)	2460 (10.0)	2115 (8.6)	3245 (13.2)	6120 (24.9)	2875 (11.7)	1280 (5.2)	420 (1.7)	50 (0.2)	50[d] (0.2)	24580

[a] Source: Federal Census, 1976. Population: Demographic Characteristics, Five-year Groups.

[b] Source: Alberta Department of Municpal Affairs. New Town of Fort McMurray; municipal census. 1977 and 1978.

[c] Percentage, given in parentheses, calculated from absolute figures.

[d] Absolute figures calculated from given percentage.

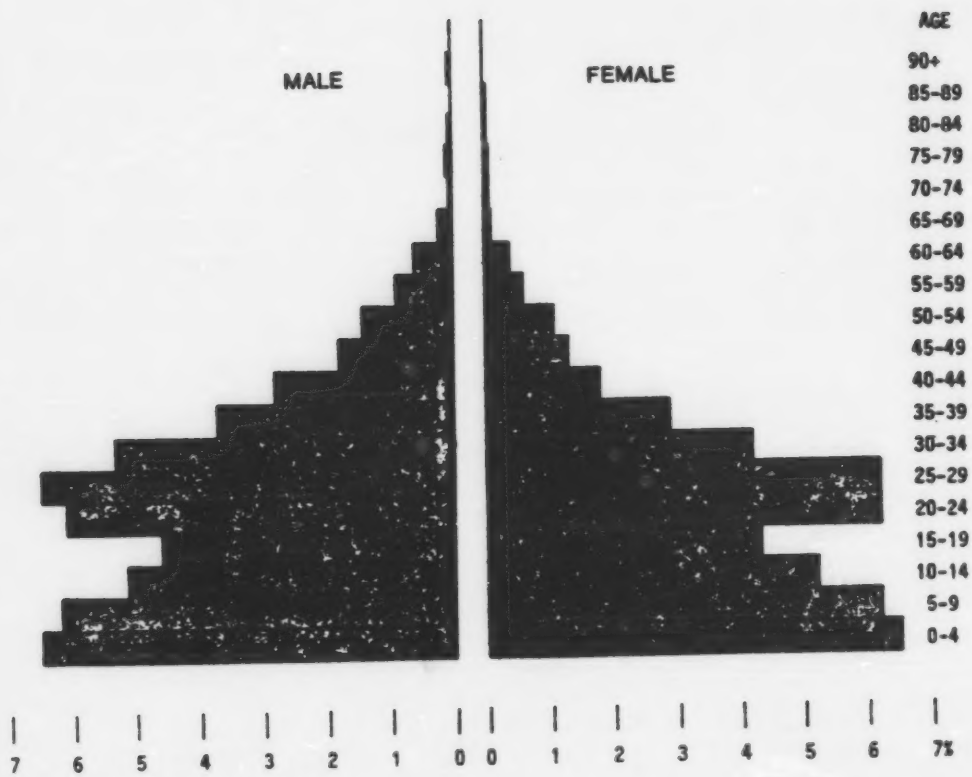

Figure 2. Sex - age population distribution, Fort McMurray, 1976 (Department of Municipal Affairs 1976).

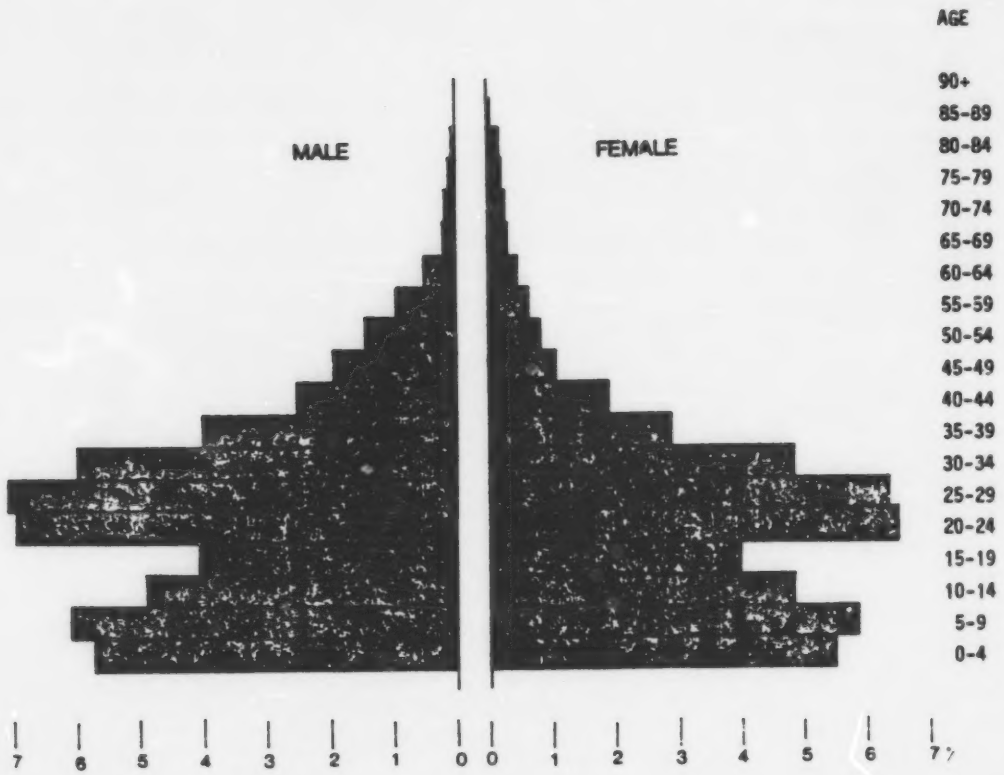

Figure 3. Sex - age population distribution, Fort McMurray, 1978 (Department of Municipal Affairs 1978).

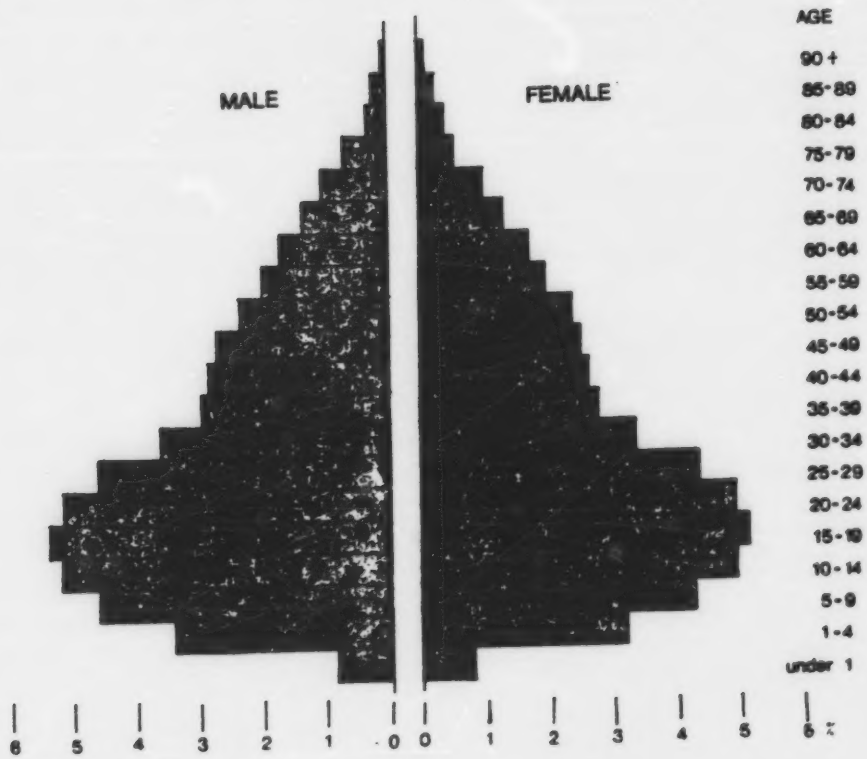

Figure 4. Sex - age population distribution, Alberta, 1976 (Dominion Bureau of Statistics 1976).

continue to grow relative to the remainder of the population. Other age groups, 20 to 24 and 35 to 44, also would likely increase. As long as a construction phase is occurring, these age groupings will form the dominant portion of the population. The number of children and adolescents should increase as families associated with an operational phase replace the younger, predominantly single adults associated with the construction phase.

2.4.2 Educational Attainment

Historical data on educational attainment in Fort McMurray are available from the 1971 and 1976 Federal census. These are shown in Table 4. The data indicates a trend towards a higher educated population. In 1971, 10.5% of the population had some post secondary education. This took a quantum leap in the next two years to 40.9%. Of interest is the increase in the percentage of the population with university training, from 10.5% in 1971 to 15.9% in 1976. There also was a correspondingly significant drop of those with less than grade nine education; 22.4% in 1971 to 12.6% in 1976.

Similar data from the 1979 Municipal census for Fort McMurray are shown in Table 4. Given the problems which arise when comparing Municipal and Federal census data (see Section 2.4.1) it appears that the trend towards a more educated population is continuing. The percentage of the population with less than grade nine decreased from 12.6% in 1976 to 5.7% in 1979. Although post secondary education is not broken down into university and non-university categories, it is likely that the percentage with university education also increased. With Syncrude becoming operational in 1978 to 1979, the technical expertise required during construction is continually being augmented by professional staff. The significance of these population shifts is analyzed in Section 4.

Table 4. Educational attainment in Fort McMurray (over 15 years of age) 1971, 1976, and 1979[a].

Education	1971 (% population over 15 years)	1976 (% population over 15 years)	1979[b] (% population over 15 years)
Less than grade nine	22.4%	12.6%	5.7%
Grades nine to 10	67.0%	19.8%	18.4%
Grades 11 to 13		26.6%	34.1%
Post secondary non-university		25.0%	
University, without degree	6.63%	9.5%	41.8%
University degree	3.95%	6.4%	
Total	100%	100%	100%

[a] Source: Dominion Bureau of Statistics. Census of Canada (1971, 1976).

[b] Alberta Municipal Affairs (1979).

2.4.3 Income

Complete historical data on per capita personal incomes are not available for Fort McMurray. However, Table 5 presents taxation statistics obtained from Revenue Canada for 1967 to 1977. Although the data provide an indication of relative change (increase or decrease) in average yearly incomes, Revenue Canada cautions that the data do not give an accurate per capita personal income figure for the following reasons:

1. Taxation statistics are based only on individuals that have filed tax returns with Revenue Canada, Taxation. Some individuals (i.e., students) who have earned small amounts of income during a year may not file a return with Revenue Canada, Taxation;
2. Some taxpayers may not report income received (i.e., understating their income);
3. Supplementary labour income is not included in tax return figures; and
4. Imputed income is not included in taxation statistics (i.e., free room and board, clothing, etc., provided to employees).

Table 5 indicates that over the 10 year period, the annual average income of Fort McMurray residents was consistently higher than the provincial average. The rate of increase also was greater in Fort McMurray at 302.7% over the 10 years compared to a 271.3% increase for the province. The effects of Syncrude construction are clearly evident in the very abrupt increases in average income since 1973. From 1967 to 1973, Fort McMurray was consistently $1500 above the provincial average. However, since 1974, Fort McMurray's average income jumped from $1323 to $4213 (18.5% to 25.8%) above the provincial average. Extrapolating the income trends into the future indicates that average income in Fort McMurray will remain higher than the provincial average. However, as Syncrude enters an operational phase, it is likely that the rate of increase will more closely resemble that of the province.

Table 5. Taxation statistics for Alberta and Fort McMurray, 1967 to 1977[a].

Year	Average Income ($)		
	Alberta	Fort McMurray	% Difference
1967	4454	5392	17.4%
1968	4773	6096	21.7%
1969	5063	6561	22.8%
1970	5312	6980	23.9%
1971	5694	7620	25.3%
1972	6355	7837	18.9%
1973	7140	8463	15.6%
1974	8503	10 437	18.5%
1975	9977	13 424	25.7%
1976	11 155	15 284	27.0%
1977	12,085	16 298	25.8%

[a] Source: Revenue Canada, Taxation.

In 1977 the average income in Fort McMurray was 25.8% (1.3 times) greater than the provincial average. It would appear that Fort McMurray residents have more disposable income available to spend on enhancing their leisure time. However, due to the high cost of living in Fort McMurray compared to other localities in the province, it is likely that a portion of this extra income is used to pay for non-leisure items.

Table 6 presents current data on income distribution in Fort McMurray. The information was obtained from the 1979 Municipal census. For comparative purposes the same information is shown also for Alberta in Table 6 as collected by Statistics Canada in 1977.

By comparing the data a number of important differences are apparent which cannot be attributed to the different enumeration methods used in the two census (see Section 2.4.1). The distribution of incomes in the province appears to be more equitable than in Fort McMurray where the majority (62%) have incomes in excess of $20 000 and high percentage earn less than $3000 (11% compared to 3.2% for the province). Moreover, 37% of the 62% of Fort McMurray families in the upper income ranges earn in excess of $30 000 a year.

This inequitable distribution has implications for the planning of leisure services. With regard to public program offerings, the ability to pay should not be a determining factor in participation. Since leisure opportunities made available by the private sector are limited to those who can afford to pay, the public sector should attempt to make some similar opportunities available to the general public.

Table 6. Distribution of families by income for Fort McMurray (1979) and Alberta (1977).

Family Income $	% of Families	
	Fort McMurray [a]	Alberta [b]
under 3 000	11%	3.2%
3 000 - 8 999	7%	13.4%
9 000 - 14 999	9%	16.4%
15 000 - 19 999	8%	16.4%
20 000 - 29 999	25%	29.9%
30 000 and over	37%	20.9%
Total	100%	100%

Source: [a] Alberta Municipal Affairs (1979).

[b] Statistics Canada (1977).

2.4.4 Dwelling Type

Table 7 presents data on occupied private dwellings in Fort McMurray. For comparative purposes, Table 7 also presents similar data for Alberta.

Fort McMurray data were obtained from the 1978 Municipal census; the most recent data of this type for the province were available from the 1976 Federal census. A problem arises when comparing the two census because categories of dwelling types are not similarly defined. Therefore, for the purposes of this analysis, structural types have been combined in categories as follows:

1. Single family;
2. Semi-detached (includes double house and duplex);
3. Townhouse (includes row house);
4. Apartment; and
5. Mobile home.

The most significant difference between Fort McMurray and Alberta (Table 7) is in the percentage of units in the low and medium density categories. The majority (64%) of dwelling types in Alberta are single family (low density). In Fort McMurray, the greatest proportion (47%) of dwelling types are medium density including townhouses, semi-detached, and mobile homes; only 30% of the units are classified as low density, single family housing. The percentage of high density units (apartments) also is slightly higher in Fort McMurray than in Alberta.

This high proportion of medium and high density units (68%) will have a considerable affect on planning leisure services in Fort McMurray. For instance, the demand for open space may be greater in neighbourhoods where high density housing prevails. It is important to note that dwelling type as an indicator of demand is useful only when considered in relation with other demographic factors such as age and social factors, for instance, availability of time and income. Dwelling types in Fort McMurray are discussed in greater detail in Section 5.6.1.

Table 7. Occupied private dwellings for Fort McMurray (1978) and Alberta (1976).

Dwelling Type	Total No. of Units		% of Population	
	Fort McMurray[a]	Alberta[b]	Fort McMurray[a]	Alberta[b]
Single Family	2 185	372 420	30	64
Semi-detached	639	41 230	9	7
Townhouse	1 082	22 990	15	4
Apartment	1 567	108 190	22	19
Mobile Home	1 687	27 360	23	5
Other	25	3 200	1	0.5
Total	7 185	575 390	100	100.00

Source: [a]Department of Municipal Affairs (1978).

[b]Statistics Canada (1976).

3. INVENTORY

Three inventory years, 1972, 1976, and 1979, have been selected to determine the historical pattern of growth of leisure services in the study area. The 1972 and 1976 inventory years were selected because they correspond with past recreation studies conducted in Fort McMurray in which facility inventories were produced. Of particular interest is the relationship between the inventory years and the progress of economic development in the preceeding 10 years.

The 1972 inventory (Reid, Crowther 1978) is related to a period of relative stability in the region. The GCOS construction period had peaked during the 1963 to 1967 period, and in 1972 the company was in an operational phase. The 1976 inventory (conducted by PERC 1976) corresponded to a period of intense economic activity and rapid growth in Fort McMurray. The Syncrude plant was midway through the construction phase and was offering employment to more than 7000 persons. In addition, there were 4000 more workers housed at the Syncrude camp. Therefore, 1976 can be seen as a period when the leisure delivery system was under stress. The 1979 inventory details the current state of leisure delivery system. The more detailed nature of the 1979 inventory provides a baseline state from which prediction of future supply levels can occur.

Although the data occur in different forms for each of the inventory years, it is possible to extract a degree of comparability from the three studies utilized. Data from 1972 originates from the Fort McMurray General Plan (Department of Municipal Affairs 1972), as developed by the Provincial Planning Branch of the Department of Municipal Affairs. This inventory is basically spatial in nature, but it is comprehensive and is substantiated by a list of identified 1972 recreational facilities outlined by Reid, Crowther (1973).

The 1976 inventory originates from data compiled in the Professional Environmental Recreation Consultants Ltd. (PERC) study, "A Five Year Parks and Recreation Master Plan for the New Town of Fort McMurray". This study offers a list of facilities and summarizes the satisfaction or dissatisfaction of Fort McMurray residents concerning

parks and recreation facilities. Other sources, such as G.R. Shelly's "Recreation Facility - Comparative Analysis, Fort McMurray Recreation Centre", supplemented PERC's data.

The 1979 inventory utilizes data collected from published and unpublished sources and from interviews with appropriate personnel and citizens in Fort McMurray, and as such it is the most comprehensive of the three inventories. Data within the inventory have been verified by the Parks and Recreation Department, New Town of Fort McMurray.

3.1 1972 INVENTORY

The 1972 inventory (see Table 8) shows an emphasis on recreational as opposed to cultural facilities. Basic recreational facilities, such as a swimming pool, golf course, an arena, curling rink, and ball diamonds, were supplied, although not always according to accepted standards. Only two facilities of a cultural nature were available, the library and a cinema. An examination of active clubs and organizations in the town (see Table 9) reveals a majority of athletic rather than culturally oriented groups. It appears that the leisure priorities of the community emphasized sporting activities rather than cultural pursuits at this stage of community development.

An open-space inventory included in the 1972 Municipal General Plan suggested that enough developed park and recreation space existed to meet the needs of 9000 to 12 000 people. This was challenged by the Reid, Crowther study of 1973:

> The distribution of parkland within the town is very uneven with the majority of acreage being distributed between MacDonald Island and the community centre. The area between, which accounts for most of the residential and commercial land in town, is almost completely devoid of recreation land other than school grounds.

3.2 1976 INVENTORY

The year 1976 represents an important development year for the leisure services system in Fort McMurray. Of major importance was the completion of a Recreation Master Plan for the community.

Table 8. Leisure facilities, Fort McMurray, 1972.

Recreational facility	Number	Location	Comment
Golf Course	1	MacDonald Island	9 holes, sand greens, includes driving range
Swimming Pool	1	Lower Townsite	indoor pool, 25 m. length, diving tank
Arena	1	Lower Townsite	seating capacity of 425
Curling Rink	1	Lower Townsite	4 sheets of ice
Ball Diamonds	7	Waterways, Lower Townsite	softball, baseball
Tennis Courts	2	Lower Townsite	hard surfaced
Outdoor Rinks	2	Waterways, Lower Townsite	permanent location
	3		non-permanent location
Total rinks	5		
Soccer Fields	2	Turcotte-Clark, St. John's Schools	
Toboggan Run	1	Turcotte-Clark Schools	
Community Hall	1	Lower Townsite	limited multi-use capability
Skiing	1	West of Fort McMurray	rope tow, 2 runs
Boat Club	1	Snye	informal launch area
Library	1	Lower Townsite	
Theatre (Cinema)	1	Lower Townsite	
Centennial Park	1	Highway #63	

continued . . .

Table 8. Concluded.

Open Space	Acreage	Location	Comment
Playgrounds	1.18	Birch Grove Subdivision	
	0.30	Waterways (Legion property)	
	0.30	Recreation Centre (King Street)	
	0.30	Alberta Drive, Popular Grove	
	0.30	Clark Crescent, Popular Grove	
Parks and Urban Reserve	10.51	Hangingstone Park, Museum and Swimming Area	joint use school ground site
	7.60	Clearwater Subdivision	
	1.04	Waterways (Legion Site)	
	2.17	Popular Grove	
	1.51	Popular Grove	
	2.94	River Lot 12, Block 10	
	8.00	Park Reserve (some untility lots)	open space areas with recreational potential
Undeveloped Sites	84.89	MacDonald Island area between golf course and Snye	
	77.90	MacDonald Island, golf course expansion area	
	47.00	Clearwater, adjacent to the Snye	

Sources: 1. Department of Municipal Affairs. (1972). 2. Reid, Crowther and Partners Limited. (1973).

Table 9. Clubs and organizations, Fort McMurray, 1972[a].

Al-Anon

All Saints Anglican Parish Guild

Baptist Youth Fellowship

Brownies

Catholic Women's League

Civil Service Association

Clearwater Ladies' Fastball

Cosmopolitan Club

Elks

Fort McMurray Badminton Club

Fort McMurray Figure Skating Club

Fort McMurray Minor Baseball

Fort McMurray Senior Hockey League

Fort McMurray Tennis Club

Girls' Club

Girl Guides

Junior Forest Wardens

Miskanaw Golf Club

Nistawoyou Association

Open Stage Society

People's Park (Youth Club)

Royal Canadian Legion

Saint Aidens Women's Auxiliary

Tar Island Ladies

Philatelic (Jr. - Adult)

Masons

Metis Association

Voice of Alta. Native Women's Society

Home and School Association

McMurray Broadcasters

Friends of Music

Army Cadets

Fort McMurray Art Club

Boy Scouts

continued . . .

Table 9. Concluded.

Kinette Club	Candy Stripers
Knights of Columbus	Chamber of Commerce
Miskanaw Golf Club	Clearwater Boxing Club
Clearwater Light Horse and Rodeo Association	Fish & Game Association
Cubs	Fort McMurray Men's Fastball League
Fort McMurray Basketball League	Fort McMurray Sno-Trakkers
Fort McMurray Soccer League	Guide Association
Fort McMurray Minor Hockey League	Junior High School Girls' Club
Indian-Eskimo Assoc. of Canada	Ladies' Order of the Royal Purple
Kinsmen Club	Oilsands Curling Club
Mistee-Seepee Ski Club	Peter Pond High School Students' Union
Overture Concert Society	
Skating	Swimming
Teen-Time (Youth Group)	Bridge Club
Art Club	Boating Club

[a]Source: Reid, Crowther and Partners Limited (1973).

Although the document was not accepted immediately, it represented a necessary planning stage prior to the town receiving major facility grants from the Provincial Government. The study did serve to identify a number of recreational and cultural needs voiced by the community residents.

The Master Plan also led to the establishment of a joint-use agreement between the School Boards, the Recreation Board, and the Board of Administrators for the provision and use of public facilities. This included usage of Keyano College, the new high school, and the planning of an auditorium-theatre for college, high school, and community use.

The 1976 inventory (Table 10) reveals a slight increase in the number of recreational facilities. Only one new facility, Gregoire Recreation Complex, was established, although a number of existing facilities expanded their capabilities. For example, an additional arena was completed, new tennis courts were built, and new playing fields were constructed.

Although the number of cultural programs available increased from 1972, the 1976 inventory continues to show a bias toward athletic facilities. Programs (Table 11) still have an active basis but groups in music, theatre, arts and crafts, and dance began to emerge.

Financial assistance from Syncrude Canada Limited enabled the Parks and Recreation Department to complete several facilities to assist with the construction of Beacon Hill Arena and two school playgrounds. Additional monies from Syncrude were also made available to local organizations for leadership training, clinics, and equipment.

The year 1976 was also the peak of the construction phase at Syncrude. At this time, approximately 4000 men and women were housed in a camp at the Syncrude site. Contrary to first impression, this large, predominantly young male workforce, located close to Fort McMurray, had only a minimal impact upon the town's leisure services.

Table 10. Leisure facilities, Fort McMurray, 1976[a].

Recreational Facility	Number	Location	Comment
Golf Course	1	MacDonald Island	9 holes, sand greens, includes driving range
Swimming Pool	1	Lower Townsite	indoor pool, 25 m. length, diving tank
Arena	2	Lower Townsite, Beacon Hill	capacity 425 and 300
Curling Rink	1	Lower Townsite	4 sheets of ice
Ball Diamonds	8		
Tennis Courts	6	Lower Townsite, Beacon Hill	
Outdoor Rinks	2	Waterways, Haver Townsite	permanent location
Soccer Fields	3	Peter Pond and Turcotte Schools, MacDonald Island	
Skiing	1	West of Fort McMurray	Mistee Seepee Ski Club, rope tow, 2 runs
Gregoire Recreation Complex	1	Gregoire Park	gymnasium, 3 multi-purpose rooms
Boating	1	Snye	dock only
Syncrude Recreation Centre	1	Syncrude Plant	gymnasium, multi-purpose room, Tamarack Club, temporary playing field
Billiards	2	Gregoire Park and Lower Townsite	
Pinball	1	Lower Townsite	
Boat Launch	1	Snye	minimal development, water access
Gregoire Park Recreation Centre-Gymnasium	1	Gregoire Park	operated by Alberta Housing

continued . . .

Table 10. Continued.

Cultural Facility	Number	Location	Comment
Kinsmen Centre	1	Lower Townsite	trailer facility
Legion Hall	1	Waterways	125 seating capacity
Pavilion	1	MacDonald Island	multi-purpose
Community Halls	2	Lower Townsite	movie theatre
Theatre	1	Lower Townsite	

Open space	Acreage	Location	Comment
Playgrounds	not given	Legion property Ptarmigan Beacon Hill totlots	
Parks			
- Lions Park	as in Table	Lower Townsite	
- Heritage Park		Lower Townsite	
- Centennial Park		Highway 63	

continued . . .

Table 10. Concluded.

Educational Facility	Number	Location	Comment
Beacon Hill Elementary School	1	Beacon Hill	
Clearwater Elementary School	1	Lower Townsite	
Dr. K.A. Clark Elementary School	1	Lower Townsite	
Fr. Turcotte School	1		
Keyano College	1	Lower Townsite	
Peter Pond Junior High School	1	Lower Townsite	
St. Johns Junior High School	1	Lower Townsite	
Thickwood Heights Elementary School	1	Thickwood Heights	

[a] Sources: PERC (1976). Shelly, G.R. and Associates Limited (1976)

Table 11. Leisure programs, Fort McMurray, 1976[a].

Program	Age Group	Facilities Used	Sponsoring Agency
Music Instruction	open	school facilities and private facilities	YM/YWCA, school authorities and individuals
Community Choir	Teen & Adult	Clearwater school	YM/YWCA
Community Band	Teen & Adult	school facilities	Community Band Association
Recreational Swimming	open	Centennial Pool	Town
Swim Instruction	open	Centennial Pool	Town
Competitive Swimming	open	Centennial Pool	Swim Club
Summer Playground	6-15	various playgrounds	Town
Blueberry Festival	open	MacDonald Island	Blueberry Festival Association
Winter Carnival	open	Snye	Winter Carnival Association
Camping & Picnicing	open	various outdoors	unorganized
Hunting & Fishing	open	various outdoors	unorganized
Boating	family groups	various outdoors	Ft. McMurray Boating Association
Group Camping	open	Regional Campground	Town, Girl Guides, Boy Scouts, YM/YWCA and Regional Camping Assoc.
Boys Fastball	7-16	various	Boys Fastball League
Boxing	Teen	school gym	Boxing Club
Senior Citizens Act.	60 & over	Heritage Park	Golden Age Club
Square Dancing	Adult	private homes	Ptarmigan Sq. Dance Club

continued . . .

Table 11. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
Badminton	Teen & Adult	School Gyms	Badminton Club
Minor Soccer	11-14	School grounds	school authorities
Rugby	Adult	MacDonald Island	Rugby Club
Public Skating	Open	Arenas	Town
Track & Field	Teen & Adult	various	Track & Field Assoc.
Musical Concerts	open	school gyms	Overture Concert Soc. Friends of Music
Chess	open	private homes	Chess Club
Senior Hockey	Adult	Beacon Hill Arena	Senior Hockey League
Table Tennis	Teen & Adult	school gym & private homes	Table Tennis Club
Baton Twirling	3-21	school gyms	Cosmo Mothers Club
Girls Fastball	7-17	Dr. Clark & Fr. Turcotte school diamond	Girls Fastball League
Boys Fastball	7-16	McLeod diamonds	Boys Fastball League
Weight reducing	Teen & Adult	School gym	TOPS

continued . . .

Table 11. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
Golf	Teen & Adult	MacDonald Island Golf Course	Maskanaw Golf Course
Senior Soccer	Teen & Adult	MacDonald Island Pitch	Soccer Assoc.
Folk Dancing	4-15	school gyms, Legion Hall, Church basement	Tara Dancers
Archery	Teen & Adult	Church gym	YM/YWCA
Tap Dancing	children	School gym	YM/YWCA
Fitness	adult	School gym	YM/YWCA
Creative Dance	Adult Women	School gym	YM/YWCA
Curling	Teen & Adult	Oilsands curling rink	Oilsands Curling Club
Chess	Teen & Adult	School rooms	Chess Club
Equestrian	Family groups	leased land	Lighthorse & Rodeo Association
Minor Hockey	6-16	Beacon Hill & Townsite arenas	Minor Hockey Association
Figure Skating	5 & over	Beacon Hill & Townsite arenas	Figure Skating Association
Alpine Skiing	family groups	slope in area 1	Mistee Seepee Ski Slope
Nordic Skiing	family groups	various outdoors	Nordic Ski Club
Skidooing	family groups	various outdoors	Snow Trackers

continued . . .

Table 11. Concluded.

Program	Age Group	Facilities Used	Sponsoring Agency
Mens Fastball	Teen & Adult	various	Mens Fastball League
Commercial Mens Fastball	Teen & Adult	various	Commercial Fastball League
Womens Fastball	Teen & Adult	various	Womens Fastball League
Basketball Mens	18+	school gyms	Mens Basketball League
Womens Volleyball	Teen & Adult	school gyms	Womens Volleyball League
Mens Volleyball	Teen & Adult	Peter Pond Gym	Mens Volleyball League
Tennis	Teen & Adult	Beacon Hill & Peter Pond Courts	Tennis Club
Womens Basketball	Teen & Adult	Keyano College Gym	Womens Basketball League
4-Wheel Driving	Family Groups	various outdoor	Muskeg Munchers
Brownies, Girl Guides	8-17	schools & ECS facilities	Girl Guide District
Cubs & Scouts	8-17	Schools & ECS facilities	Scout District
Motorcycling	8 & over	various outdoor	McMurray Dirt Riders Assoc.
Weaving	Adult	private homes	Weaving Clubs
Pottery/Ceramics	Teen & Adult	private facilities	unorganized
Painting	Teen & Adult	private homes	unorganized
Reading	Teen & Adult	Library, schools and private homes	Library Board

[a] Source: PERC (1976).

This lack of impact can be attributed to five factors:[1]

1. The Syncrude Recreation Centre was in operation in 1976 and provided camp employees with some recreational opportunities;
2. The major impact from construction workers was on the local bars and this was partially alleviated with the opening of the Muskeg Club (a large bar on the Syncrude site);
3. The 40 km which separate Syncrude and Fort McMurray appear to have been significant enough to deter large-scale use of the town's leisure facilities;
4. Irregular working hours and rotating shifts did not leave camp workers with enough discretionary time to make full use of Fort McMurray facilities; and
5. The transient nature of the workforce (average employment could be measured in weeks) inhibited commitments to scheduled activities and, therefore, became a barrier to participation in leisure activities both in Fort McMurray and the Syncrude Recreation Facility.

3.3 1979 INVENTORY

The 1979 inventory is divided into five segments: recreation facilities; cultural facilities; an open space inventory; recreational, cultural, and instructional programs; and regional leisure facilities outside the Fort McMurray municipal area.

3.3.1 Recreational Facilities

The inventory (Table 12) illustrates two trends in facility provision. First, there has been an expansion of previously existing facilities. For example, the number of arenas has increased from one in 1972, to two in 1976, and three in 1979. Facilities for curling, baseball, soccer, and tennis have increased in number since 1972.

---

[1] *Personal contact with Vince Allit, Recreation Director, Syncrude Camp.*

Table 12. Existing recreational facilities, Fort McMurray, 1979.

Recreational Facility	Number	Location	Year Implemented	Comment
Swimming Pool (Indoor)	1	Lower Townsite	pre 1971	an indoor 25 m pool with separate diving tank.
Tennis Courts	3	Peter Pond School-Lower Townsite	pre 1971	
	3	Beacon Hill	1974	
	6	MacDonald Island	1979	
Total tennis	12			
Arenas	1	Lower Townsite	pre 1971	seating capacity- 425
	1	Beacon Hill	1976	
	1	Thickwood Heights Recreation Centre	1978	incomplete, but utilized in 1978
Total arenas	3			
Curling	4	Lower Townsite	pre 1971	curling sheets not utilized past year
	12	MacDonald Island	1978	
Total curling	16			
Golf Course	1	MacDonald Island	1972	9 hole golf course, sand greens
Golf Driving Range	1	MacDonald Island	1972	
Ball Diamond	4	MacDonald Island	1978	Fastball Diamond
	15	Public and Separate Schools		Fastball Diamond
Total ball diamonds	19			
Skiing (downhill)	1	8 km north of Fort McMurray	1972	Rope Tow - Mistee Seepee Ski Slope
(cross-country)		Linton site		32km of trail

continued . . .

Table 12. Continued.

Recreational Facility	Number	Location	Year Implemented	Comment
Outdoor Skating Rinks	3	Clearwater & Thickwood Schools, Thickwood Reserve		Removable boards, operated by Parks and Recreation.
	2	Gregoire Park		Operated by Alberta Housing
Total rinks	5			4 "ice patches" operated by Parks and Recreation (eg. Snye)
Racquetball/Handball	4	MacDonald Island Complex	1978	
	7	Matchpoint Court Club -Gregoire Park	1978	
		Hangstone Place		
	1	Fort McMurray High School		
		Fr. Beauregard	1979	
	1	Riverpark Glen		
Total racquetball/ handball	15			
Squash	1	MacDonald Island Pavilion	1978	
	1	Matchpoint Court Club		
Total squash	2			
Soccer Pitches	2	MacDonald Island	1979	Incomplete
	2	Gregoire Park	1979	
	4	Peter Pond & Fr. Turcotte Schools		
Total soccer	8			
Cricket Pitch	1	St. Pauls School, Thickwood Heights	1979	
Minature Golf	1	Lower Townsite	1977	
Go Cart Track	1	Lower Townsite	1977	
Bowling	1	Gregoire Park		
Billiards	2	Gregoire Park and Lower Townsite		
Pinball	1	Lower Townsite		
Boat Launch	1	Snye		minimal development, water access
Gregoire Park Recreation Centre -Gymnasium	1	Gregoire Park		operated by Alberta Housing

continued . . .

Table 12. Concluded.

Recreational Facility	Number	Location	Year Implemented	Comment
Leisure Centers				owned by Northward Developments, managed by YMCA (status of Cedarwoods will change to resident management, Sept/79)
Ravine Park	1	Abasands		leisure pools (75708 litres), Sauna, change rooms, multi-purpose room, arts and crafts room, lounge
Signal Hill	1	Thickwood Heights		
Cedarwoods	1	Thickwood Heights		
Hangingstone	1	Abasands		pool, wading pool, sauna, change rooms, exercise room, workshop area, arts and crafts room, racquetball court, multi-purpose room, lounge, reading room, (classroom in Riverpark Glen only).
Riverpark Glen	1	Lower Townsite		

A comparison between Tables 10 and 12 reveals that in 1976 only six tennis courts existed; this was expanded to 12 with the addition of six new courts on MacDonald Island. This period also saw the construction of 11 new baseball diamonds, five new soccer fields, and 12 new sheets of curling ice.

Secondly, facilities for a greater range of recreational activities have been developed. Raquetball, handball and squash courts, cricket pitches, bowling, billiards, miniature golf, and a go-cart track have been developed in recent years, thus expanding the range of recreational opportunities available. Facility supply was increased further with the establishment of six leisure centres managed by the YMCA. These centres provide a small number of facilities for recreational activities. However, usage is restricted to tennants of the adjacent housing complex. The leisure centres are specifically dealt with in Section 3.5.

While the 1979 inventory indicates a rapid expansion in facilities, one must also consider the conditions of those structures which were in place prior to the Syncrude era. Aging facilities such as the curling rink and hockey arena, in the Lower Townsite, require structural upgrading in order to continue as viable components of the leisure system. As of August 1979, the local Recreation and Cultural Board was undecided as to the future of these two particular facilities.

3.3.2 Cultural Facilities

Present cultural facilities (Tables 13 and 14) are still somewhat limited in their scope. However, improvements have been made since 1972; the movie theatre has expanded, a drive-in theatre has opened, two drop-in centres were established, the library moved into larger premises, and the completion of the MacDonald Island complex provides additional meeting and banquet space; however, specialized cultural facilities are still lacking.

Some deficiencies will be overcome in the near future. A new library of 1858 m^2 will be incorporated within the newly planned

Table 13. Existing cultural facilities, Fort McMurray, 1979.

Cultural Facility	Number	Location	Year Implemented	Comment
Library	1	Lower Townsite	pre 1971	a new library is planned
	1	Bookmobile	1978	for completion 1981-82
Movie Theatre	1	Lower Townsite	pre 1971	2 cinemas
	1	Syncrude Camp	1974	1 cinema
Total theatres	2			
Drive In Theatre	1	Airport Road	1979	
MacDonald Island Complex				
- pavilion	1	MacDonald Island	1972	seating for 125
- meeting room - banquet hall	1	MacDonald Island	1978	seating for 600
- exercise room - board room	1	MacDonald Island	1978	
Legion Hall	1	Waterways		
Kinsmen Centre	1	Lower Townsite	1972	double wide trailer
Knights of Columbus	1	Waterways	1972	double wide trailer
Museum	1	Heritage Park		Historical buildings and exhibits
Drop In Center	1	Heritage Park		Senior Citizens
	1	Nistawoyou		native friendship centre
Total Centres	2			
Churches	6			

continued . . .

Table 13. Concluded.

Cultural Facility	Number	Location	Year Implemented	Comment
Public Bars				
-Oilsands Motor Inn		Lower Townsite		tavern, lounge,
-Peter Pond Hotel		Lower Townsite		pub, lounge, dancing
-Riveria Motor Hotel		Lower Townsite	pre-1971	tavern, lounge
-Tamarack Club		Syncrude Camp	1974	tavern
Dining/lounges				
-Black Tower		Lower Townsite		
-Cedars		Lower Townsite		
-Frontier		Lower Townsite		
-Islander Inn		Lower Townsite		
-Legion		Waterways		
-MacDonald Island		MacDonald Island		
-Pier 7		Lower Townsite		
-The Den		Gregoire		
-Beef N. Brew		Waterways		

Table 14. School facilities available for cultural activities, Fort McMurray, 1979.

School	Facilities
Beacon Hill Elementary	gym, stage, classroom, science room
Birchwood Junior High	gym, stage, library, 5 classrooms
Clearwater Elementary	gym, music room, art room, science room
Dr. K.A. Clark Elementary	gym, music room, art room
Father Beauregard Edu-Com Centre	gym, multi-purpose room, 6 classrooms, ceramic studio, raquetball court, lounge area, library
Frank Spraggins Elementary	gym, stage, library, science room, classroom
Fort McMurray Composite High	gym
Good Shepherd Elementary	gym, stage, music room, science room, 3 classrooms, photography lab.
Keyano College	
Peter Pond Junior High	gym, stage, library, 3 classrooms, home economics room
St. John's Junior High	gym, stage, library, 3 classrooms, home economics room
St. Paul's Elementary	gym, stage, music room, science room, classroom, pottery workshop
Thickwood Heights Elementary	gym, stage, science room, classroom
J.A. Turcotte, OMI Elementary	gym, library, music room
Westview Elementary	gym (portable), classroom
Gregoire Elementary	

Provincial building in the Lower Townsite. Completion has been set for late 1981, pending budget approval. Also a 575 seat theatre is planned for Keyano College. This will encourage both local and touring theatre groups, thus expanding the range of cultural activities.

3.3.3 Open Space Inventory

The purpose of this inventory is to establish the supply of open space in Fort McMurray as of July 1979. The data were gathered from interpretation of 1:10 000 black and white aerial photographs taken in October 1978. Utilizing photography which is even slightly dated in a town growing as rapidly as Fort McMurray poses problems. Development is more complete in Thickwood Heights than was shown on the photography. As a result, field checking was required to update the inventory (see Figure 5).

3.3.3.1 Open space criteria. Classifying open space is best done within a hierarchical framework. Those spaces at the top of the hierarchy fulfill needs of the entire community and usually only a limited number of these facilities are present. As one moves down through the hierarchical structure to neighbourhood space and pocket parks, the spaces are increasingly oriented toward fulfilling localized needs. As one moves down the hierarchy, the frequency of provision should increase while the size of the space decreases. Listed below are the space classifications used in this inventory and the rationale behind employing these criteria.

3.3.3.2 Community space. Community space, as its name implies, is oriented toward use by the community at large. These spaces may fulfill three functions: an active function with major sports facilities (i.e., golf or large play fields with spectator seating); a passive function (large ornamental parks); or a display or cultural function (i.e., historical parks). However, given the need to develop a workable taxonomy, these spaces have been grouped together (see Table 15).

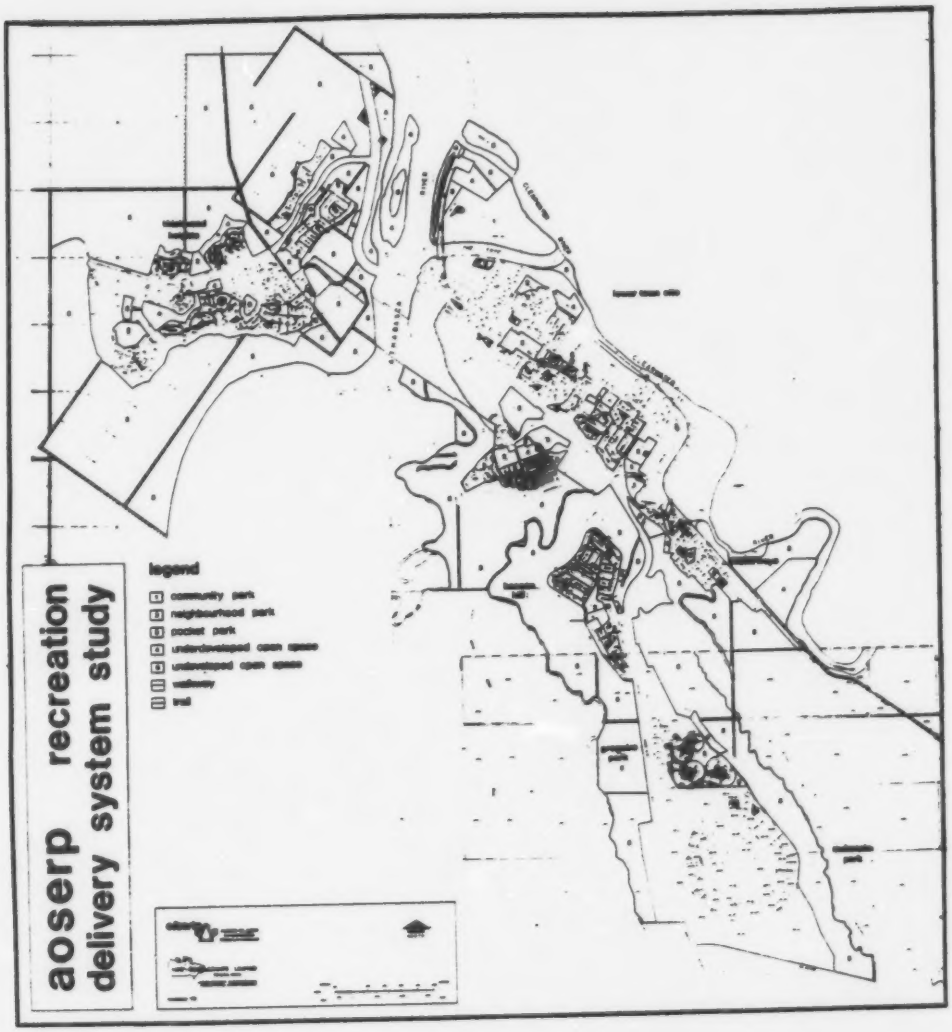

Figure 5. Open space inventory map - Fort McMurray, 1979.

Table 15. Open space hectares by neighbourhood, 1979 (all units in hectares).

Neighbourhood	TYPE OF OPEN SPACE				
	Neighbourhood Park	Pocket Park	Under-developed Open Space	Undeveloped Open Space	Community Park
Thickwood Heights	16.0	5.0	121.5	401.0	
Waterways	1.0	5.0	27.0	125.0	
Abasands	3.0	0.0	4.0	227.0	
Gregorire Park	5.0	9.0	5.0	238.0	
Lower Townsite	20.0	2.0	45.0	30.0	
Beacon Hill	8.0	2.5	2.0	206.0	
TOTAL	53.0	23.5	204.5	1227.0	73.0[a]

[a] The Community Park in Fort McMurray is located on McDonald Island.

3.3.3.3 Neighbourhood space. These spaces are provided to meet specific neighbourhood needs. To avoid complication, active open spaces associated with school yards were also categorized under this heading despite their being dealt with separately in Section 5.

3.3.3.4 Pocket parks and tot lots. Pocket parks are small open spaces which are oriented toward the sub-neighbourhood level. These spaces are predominantly passive, and their size acts as a restriction to more formal play. Large islands in cul-de-sacs also have been included under this heading.

Tot lots were too small to be analyzed using the computerized planimeter employed to measure areas. These sites were located predominantly in pocket parks and, therefore, they have been grouped together.

3.3.3.5 Underdeveloped open space. Fort McMurray has many areas which are cleared and exhibit some potential for urban recreational uses. However, at this time the lands currently remain unimproved, hence the underdeveloped designation.

3.3.3.6 Undeveloped open space. Much of the area within the corporate limits of Fort McMurray is still in brushland. This constitutes open space; however, it is totally undeveloped. More important is the fact that little of this space is within the developed portion of the town where it may be of benefit as passive recreational space. However, not all the undeveloped space can be used for recreation. Therefore, lands required for recreation should be identified and protected from competing land uses.

3.3.3.7 Walkways and U-lots. Included here is an inventory of spaces utilized as walkways. Two types of spaces are distinguished:

1. Those areas formally designed as walkways; and
2. Those U-lots intended for lane access in residential areas.

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Tot lots were too small to be analyzed using the computerized planimeter employed to measure areas. These sites were located predominantly in pocket parks and, therefore, they have been grouped together.

3.3.3.5 Underdeveloped open space. Fort McMurray has many areas which are cleared and exhibit some potential for urban recreational uses. However, at this time the lands currently remain unimproved, hence the underdeveloped designation.

3.3.3.6 Undeveloped open space. Much of the area within the corporate limits of Fort McMurray is still in brushland. This constitutes open space; however, it is totally undeveloped. More important is the fact that little of this space is within the developed portion of the town where it may be of benefit as passive recreational space. However, not all the undeveloped space can be used for recreation. Therefore, lands required for recreation should be identified and protected from competing land uses.

3.3.3.7 Walkways and U-lots. Included here is an inventory of spaces utilized as walkways. Two types of spaces are distinguished:

1. Those areas formally designed as walkways; and
2. Those U-lots intended for lane access in residential areas.

3.3.3.8 Trails. Within the undeveloped areas, a number of trails currently exist which are probably the result of informal use over an extended period of time. These trail networks, where evident on the aerial photography, have been included in the inventory.

3.3.3.9 Open space inventory, Fort McMurray, 1979. Using the classifications and methodology noted above, the supply of open space was broken down by neighbourhood. The neighbourhood breakdown is important as it indicates geographical distribution of open space. By understanding distribution, it is possible to indicate areas of undersupply within the community rather than dealing with the town as a homogeneous unit.

If one considers all classes of space noted in Table 16 as useful for community recreation and leisure purposes, there is little doubt that Fort McMurray is well supplied with open space. However, when one drops undeveloped and underdeveloped open space from consideration (due to lack of access or any type of improvement), it begins to become apparent that there is a shortage of usable open space within the town. Taking into consideration space at the neighbourhood and pocket park level, there are 73.5 ha of open space available. Furthermore, when delineating neighbourhood space, school yards were included in this classification. Therefore, there are significantly less than 73.5 ha of neighbourhood open space in Fort McMurray.

In addition to the 73.5 ha of open space, there are 33.6 km of walkway and 14.2 km of bush trail located within the municipal boundaries. Of the 33.6 km of walkway, only 10% (approximately) is truly walkway. The remaining 90% is rear drive lanes or U-lots which are not being used for vehicular access. While these lanes and U-lots serve to lessen walking distances between neighbourhoods, they do not have nearly the functional or the aesthetic appeal of a fully developed walkway system.

The 14.2 km of bush trails represent pathways which, through informal or unstructured use, are used for trail bike and

Table 16. Existing recreational programs, Fort McMurray, 1979.

Program	Age Group	Facilities Used	Sponsoring Agency
Archery	Open		Parks and Recreation
Cricket	Open	cricket pitch	Parks and Recreation
Ladies Fastball	Adult	various ball diamonds	Parks and Recreation
Minor Girls Fastball	6-16 years	various ball diamonds	Parks and Recreation
Commercial Mens Fastball	Adult	various ball diamonds	Commercial Mens League
Senior Mens Fastball	Adult	various ball diamonds	Senior Mens League
Minor Boys Fastball	6-16 years	various ball diamonds	Parks and Recreation
Minor Boys Soccer	6-16 years	soccer fields	Parks and Recreation
Senior Mens Soccer	Adult	soccer fields	Parks and Recreation
Lacrosse	Open		Parks and Recreation
Tennis	9-12 years	Beacon Hill Courts	YMCA
	13-17 years	Beacon Hill Courts	YWCA
	Adult	Beacon Hill, Peter Pond, MacDonald Island	Tennis Club
Minor Hockey	6-16 years	arenas	Minor Hockey Association
Bowling	Open	bowling lanes -Gregoire Park	Bowling Alley
Curling	Open	MacDonald Island complex	Curling Club
Boxing	Open		Clearwater Boxing Club

continued . . .

Table 16. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
Competitive Swimming	Open	Centennial Pool	Swim Club
Mini Basketball	9-12 years	Beauregard Centre	Parks and Recreation/YMCA
Mens Basketball	Adult	various school gyms	Mens Basketball League
Womens Basketball	Adult	various school gyms	Womens Basketball League
Outdoor Adventure	10-16 years	outdoor	Parks and Recreation
Kids Floor Hockey	8-14 years	Beauregard Centre	Parks and Recreation
Badminton	Open	Beauregard Centre	Parks and Recreation
	13-Adult	Peter Pond School	YMCA
	10-17	Clearwater School Gym	YMCA
Volleyball	Open	Beauregard Centre	Parks and Recreation
Physical Fitness	13-17 Years	Anglican Church	YMCA
	Ladies	various schools, MacDonald Island, Complex, Gregoire Recreation Centre, Anglican Church	
Racquetball	Adult	MacDonald Island Complex	YMCA
Golf	Adult	MacDonald Island Golf Course	Miskanaw Golf Club
	Junior	MacDonald Island Golf Course	Junior Miskanaw Golf Club
Wrestling	boys 9-12 years	Lower Townsite	YMCA
Gymnastics	6-12 years	Turcotte and Beacon Hill Schools	YMCA
	Open	Gregoire & Beauregard Centre	Club Norfort
Yoga	Open	St. Johns School	YMCA

continued . . .

Table 16. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
Gymnastics	Open 6-12 years	Turcotte and Beacon Hill Schools	Gymnastics Club YMCA
Horse Riding	Open	Airport Road	Clearwater Light Horse Association
Four-Wheel Drive	Open	outdoor	
Rugby	Open	various playing fields	Rugby Association
Snowmobiling	Open	outdoor	Sno-trakkers
Shooting	Open	range	Northern Alberta Skip Shooters
Table Tennis	Open		Table Tennis Club
Track	Open		Pace Setter Track Club
Team Handball	Adult Men	various school gyms	Team Handball Association
Commercial Hockey	Adult	Arenas	Commercial Hockey League
Oldtimers Hockey	Adult	Adult	Oldtimers Hockey Association
Figure Skating	Adult Open	Arenas Arenas	Silverblades Skating Club Noralta Figure Skating Club
Summer Playground	5-13 years	school grounds	Parks and Recreation
-day camp	6-12 years	Lions Park	YMCA
-residence camp	6-12 years	Regional Campground	YMCA
Swim Instruction	Open	Centennial	Parks and Recreation

continued . . .

Table 16. Concluded.

Program	Age Group	Facilities Used	Sponsoring Agency
Canoe and Kayak	Open	outdoors/pool	Tar Sands Canoe and Kayak Club
Downhill Skiing	Open	ski hill	Ski Club
Cross Country Skiing	Open	outdoor/MacDonald Island/ Linton Site	Nordic Ski Club
Camping	Open	residence camp	Regional Camping Association Camp Yogi
Car Racing	Adult	oval track	Clearwater Car Club
Dog Sled Racing	Open	Snye	Dog Racing Club

snowmobile riding. Once again, these are unimproved trails and they do not make allowances for safety, privacy near residential areas, and conflicts between competing recreational uses (i.e., snowmobiling and cross-country skiing).

3.4 LEISURE PROGRAMS

The most notable change in the leisure delivery system between 1976 and 1979 is the rapid expansion and diversification of programs available to Fort McMurray residents (see Tables 16 and 17). Leisure programs are provided by a wide range of agencies and private groups. These include the Fort McMurray Parks and Recreation Department and the YMCA who offer recreational programs; cultural programs are offered by a variety of private nonprofit public service agencies; and instructional programs from Parks and Recreation, Keyano College, and the YMCA.

In the field of programming, the Parks and Recreation Department play an important role:

1. It acts as the coordinator for all the agencies noted above; and
2. Its responsibility includes scheduling and booking of facilities for all programs through the multi-use agreement noted in the 1976 inventory.

The Parks and Recreation Department fills another singularly important role in the provision of leisure programming. In its position as coordinator of programming, it is the Department's responsibility to ensure that no duplication of programming occurs between the numerous participating agencies. The corollary to this is that, when there is a gap in programming which no other agency is willing to fill, Parks and Recreation steps in to fill the void. Therefore, its role can be seen as ensuring that Fort McMurray is well serviced by leisure programs.

Tables 16 and 17 illustrate the wide range of programming now available in Fort McMurray. Examination of these tables reveals that, while programming related to active sports is still very strong,

Table 17. Existing cultural and instructional programs, Fort McMurray, 1979.

Program	Age Group	Facilities Used	Sponsoring Agency
Arts and Crafts (16)			
-printing	adult	Keyano	Keyano
-painting	adult	Keyano	Keyano
-drawing	adult	Keyano	Keyano
-pottery	5-12 years adult		YMCA Keyano College, People Pottery
-sculpture	adult		
-quilting	adult		
-photography	adult	Keyano, outdoor	Keyano Parks and Recreation
-macrame	12-16 years adult	Anglican Church Keyano, Gregoire School	YMCA Keyano College
-creative crafts	6-12 years	Clearwater School	YMCA
-pre-school education	4-5 years	Gregoire Recreation Centre Beacon Hill School Clearwater School	YMCA
-weaving	adult		Primitive Weaving Guild
Dance			
-Polynesian Dancing	adult children	Keyano Keyano	Keyano College Parks and Recreation
-disco	open	Anglican Church, Beacon Hill School	YMCA

continued . . .

Table 17. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
-dancercize	open	MacDonald Island Complex	YMCA
-creative dance	5-13 years	Gregoire Recreation Centre	YMCA
-interpretive dance	6-12 years adult	Gregoire Recreation Centre Beacon Hill School	YMCA
-square dancing -square dance	open		Ptarmigan Square Dance Club
-Comerford Dancers			
-Scottish Country Dancers			
-Scottish Highland Dancers			
Music (8)[a]			
-music appreciation	adult	Keyano	Keyano
-guitar	open	Keyano	Keyano
-music theory	adult	Keyano	Keyano
-piano	open	Keyano	Keyano
-instrumental board	adult	Keyano	Keyano
-choir/vocal groups	adult	Keyano	Keyano
-all school marching band	student	school facilities	Composite High School

continued . . .

Table 17. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
-Cafe Boreal	adult		
-Pipe and Drum Band	open		Kinsmen Scottish Pipe and Drum Band
-Music Teachers group	adult		Music Teachers Group
Theatre			
-theatre techniques (4)	adult	Keyano	Keyano
-theatre unique			
-F.M. Theatre Live			CP's Community Theatre
-Drama Club		Composite High School	McMurray Composite High School Drama Club
-Fort Flicks Film Society			
Shop Crafts (6)			
-welding	adult	Keyano	Keyano
-carpentry	adult	Keyano	Keyano
-heavy duty mechanical	adult	Keyano	Keyano
General Interest (12)			
-instructional	adult	Keyano	Keyano
-self-improvement	adult	Keyano	Keyano

continued . . .

Table 17. Continued.

Program	Age Group	Facilities Used	Sponsoring Agency
Languages			
-French	adult	Keyano	Keyano
-German	adult	Keyano	Keyano
-Spanish	adult	Keyano	Keyano
-English	adult	Keyano	Keyano
Business Administration (7)			
-Accounting	adult	Keyano	Keyano
-Statistics	adult	Keyano	Keyano
-Law	adult	Keyano	Keyano
Business Education			
-bookkeeping	adult	Keyano	Keyano
-shorthand	adult	Keyano	Keyano
-typing	adult	Keyano	Keyano
Early Childhood Education (3)	adult	Keyano	Keyano
High School Courses (7)	adult	Keyano	Keyano
Business Seminars (8)	11-15 years	Anglican Church	YMCA
Cooking			

continued . . .

Table 17. Concluded.

Program	Age Group	Facilities Used	Sponsoring Agency
Writers Guild	open		Writers Guild
Boy Scouts, Cubs,	6-15 years		Boy Scouts of Canada
Girl Guides, Brownies	6-15 years		Girl Guides of Canada
Outdoor Programs	Adult	outdoors	Keyano
Reading	Open	Library	Public Library

a. Figures in parentheses represent number of courses offered by Keyano College

the community is now beginning to show interest in a wide variety of cultural pursuits.

3.5 PRIVATE OR EXCLUSIVE FACILITIES

Fort McMurray, like many other northern resource communities, has direct involvement in the leisure delivery system by a major employer within the town. In Fort McMurray, four leisure centres have been provided by Syncrude, and one each by Alberta Housing and the condominium owners in the Cedar Woods area of Thickwood Heights. These facilities are specifically for use by residents of housing complexes and are not normally available to the public at large.

Within the analysis sections of this report, the goal is to develop a series of facilities and open space standards which would provide both Fort McMurray and a new town with a well-rounded system of leisure opportunities. In attempting to do so, the decision has to be made as to whether one should include the leisure centres, which are not accessible to the entire community, in the overall analysis leading to the development of these standards. To ensure an equitable distribution of opportunities for all residents, the leisure centres are not incorporated within the standard development process.

This is not to suggest that the leisure centre concept is invalid for, as later analysis will show, these facilities provided opportunities at a crucial point in the town's growth. However, the restrictive nature of the centres still must preclude them as a variable within the standard analysis in Sections 5 and 6.

3.6 REGIONAL LEISURE FACILITIES

The lack of a significant regional population has resulted in few leisure services being developed outside the Town of Fort McMurray; i.e., Gregoire Provincial Park, campgrounds, shooting range, and horse riding (see Table 18).

Alberta Provincial Parks operates a park and campground on Gregoire Lake. The campground has recently expanded to accommodate

Table 18. Regional leisure facilities, AOSERP study area, 1979.

Area	Facility	Location	Implemented	Comment
Anzac	Community hall, with multi-purpose room, playing field, outdoor skating rink (not flooded in 1978) cross-country ski trails beach, day use picnic area,	Gregoire Lake		new community hall needed
Fort Chipewyan	Curling rink outdoor skating rink baseball field school gym, stage adventure playground	Lake Athabasca		2 sheets natural ice
Fort MacKay	Outdoor skating rink playground school gym, stage, classrooms, library, meeting hall Old school Building	65 km north of Fort McMurray		sufficient school space at present Band office has been used in past years
Other				
Gregoire Lake Provincial Park	-189 camping sites, beach, swimming, -boat launching, boat and canoe -rentals			operated by Alberta Recreation Parks and Wildlife
Hangingstone River Campsite	Cookhouse pits			operated by Alberta Transportation
Loon Lake	12 campsites	Anzac Road, 32 km south		operated by Alberta Transportation
Marianna	10 campsites			operated by Alberta Transportation
Youth Camp	Regional campsite	Gregoire Lake		shared by a number of youth groups

continued . . .

Table 18. Concluded.

Area	Facility	Location	Implemented	Comment
Camp Yogi	campground	Gregoire Lake		operated by YMCA and Separate School Board
Magua Lake	16 campsites	Magua Lake	1976	operated and maintained by Alberta Forestry Service
Engstrom	primitive campsite	Clearwater River	1975	operated and maintained by Alberta Forestry Service
Miseieutin	primitive campsite	Clearwater River	1975	operated and maintained by Alberta Forestry Service
Cascade Rapids	primitive campsite	Clearwater River	1978	operated and maintained by Alberta Forestry Service
Whitemud Falls	primitive campsite	Clearwater River	1978	operated and maintained by Alberta Forestry Service
Dore Lake	picnic area - 10 units	Fort Chipewyan		operated and maintained by Alberta Forestry Service
Magua Hiking Trail		Magua Lake		operated and maintained by Alberta Forestry Service
Equestrian				
Clearwater Light Horse	stables	Airport Road		commercial outfit
Bar B.J.	riding	Gregoire Lake		fish and game association
Shooting Range	skeet, small bore and rifle	12 km south, Highway 63		unpaved track
Popular Speedway	auto racing	15 km north, Highway 63		
Syncrude Camp	gym, multi-purpose room, playing fields, outdoor rink, tamarack club,			

the heavy demand from Fort McMurray. Gregoire Park offers 189 camping sites and is filled to capacity on most weekends.

The Alberta Forestry Service operates and maintains a number of campsite locations in the region, as does Alberta Transportation. Recreational activities that are presently pursued in the region include boating, canoeing, hiking, horseback riding, camping, hunting, and fishing. Present facilities are heavily overused and are not capable of supporting current types and amounts of use (Department of Energy and Natural Resources 1978).

The Alberta Forest Service (1978) has initiated a five-year plan for the Clearwater Forest. The plan first divides the forest region into zones indicating protection and use areas. The five-year development plan focuses upon providing a range of camping facilities (walk-in, car oriented, and water oriented), trails, and the development of canoe routes. All of the above are designed to take pressure off of existing facilities and to provide a mechanism for controlling use in the future.

The supply of leisure services in each of the three unincorporated communities of the region are similar in content, and function. The facilities provided generally include a meeting or community hall, outdoor activity areas such as ball diamonds, playgrounds, and a school building which is utilized for leisure programs.

Fort Mackay's new school facility provides sufficient space to accommodate indoor leisure activities. The community has a functioning Recreation Board which provides a number of programs; i.e., hockey, skating, basketball, floor hockey. Local resource persons (i.e., teachers) also take an active but informal role in the supply of leisure activities.

Leisure opportunities in Anzac are comprised of two types: those serving strictly local interest and those serving the regional population. Some of the local facilities require upgrading but this will be dependent upon the expressed demand for improvement. One priority suggested by Alberta Parks and Recreation is the construction

of a new community hall to replace the present structure. The outdoor rink was not in operation last year but new cross-country ski trails, varying from 3 to 5 km in length, may compensate.

Anzac, because of its location on Gregoire Lake, offers a prime leisure opportunity to the residents of Fort McMurray. "Gregoire Lake has become the recreation spot for recreation-hungry residents of Fort McMurray. Specifically the lovely beach in Anzac attracts hundreds of people from Fort McMurray evenings and weekends all summer" (Van Dyke and Loberg 1978:130). The influx of overnight campers to Gregoire Lake has created problems. The flow of traffic through Anzac, for example, increased to the point where it became quite disruptive to the residents of Anzac. Restricting the site to day use only alleviated many of the more serious problems.

Fort Chipewyan, a larger community than either Anzac or Fort MacKay, provides similar leisure opportunities. In addition to the school gymnasium, outdoor skating rink, and ball diamond, the community has a curling rink with two sheets of natural ice, and an adventure playground. As in Anzac, a new community hall is needed. There is no local recreation director, not even on a part-time basis, and, although a Recreation Board has been implemented, it does not appear to be active at this time.

Although many facilities need to be improved in the three unincorporated communities, demand for improvement or additional leisure services must warrant such action. To date, the level of interest in leisure services has been overshadowded by other problems (i.e., wages, economy, land tenure).

4. ANALYSIS OF THE LEISURE DELIVERY SYSTEM IN FORT MCMURRAY, 1972 TO 1979

Sections 2 and 3 have documented the setting and timing of the delivery of leisure opportunities in the AOSERP study area. Section 4, through the use of additional data, attempts to provide insight into the demand for leisure opportunities. These can then be compared with the 1979 supply and general indications of supply sufficiency generated.

As an introduction to the analysis, the relationship between demographic variables (age, income, education) and leisure preferences will be discussed. Following this, the three inventory years are then analyzed. Special attention is paid to the relationship between population structure and growth and changes in the leisure delivery system. Also discussed within each inventory year are other influences, such as the private sector involvement in the supply of leisure opportunities, and the role of forces external to Fort McMurray in the provision of services. For ease of discussion, each inventory year is broken into four subsections: facilities, programming, open space, and private sector.

4.1 DEMOGRAPHIC VARIABLES AS INDICATORS OF LEISURE PREFERENCES

Since the late 1950's, when recreation research began to turn from an activity focus to a more behaviorally-oriented approach, it has been found that demographic variables can be employed as general indicators of leisure preferences. This is especially important to this study where interest is in understanding the morphology of a leisure delivery system, but no historically rooted empirical data are available. The lack of preference studies in the 1972 to 1978 period means that it is necessary to assess the responsiveness of the delivery system by how it reacted to changes in demographic structure (implied demand for leisure opportunities).

4.1.1 Age

Age is directly linked to preference for leisure opportunities. As Hendee et al. (1971:31) point out, aging is accompanied by declining physical stamina, and a consequent reduction of participation in more strenuous activities. Burton (1970) also indicates that, as the population ages, the demand for organized team sports tends to decline. He believes this is due to the physical effort demanded of participants and the discomfort and even pain associated with this.

If one examines the age profiles presented in Section 2.4.1, it is evident that Fort McMurray's population is generally younger than that of the Province of Alberta. However, when one compares the 1976 and 1978 profiles for Fort McMurray, it is also evident that the town's age profile is maturing and beginning to resemble that of the entire province.

The figures would indicate that in the past the latent demand for leisure opportunities would have been in the area of active sports, particularly organized team sports, tennis, and swimming.

Extrapolating the Fort McMurray aging trend into the future could indicate a need for more leisure opportunities which are less physically demanding, for instance, cultural activities, passive park space, curling, golf, and swimming. These activities usually involve only individuals or small groups and are not primarily competitive. Burton (1970) defines them as minority activities.

4.1.2 Education

Culture can be defined as "the training and refinement of the mind, tastes, and manners; in other words it has to do with lifestyle, in particular with the intellectual elements of life" (Burton 1970). If one accepts Burton's definition of culture, then it comes as no surprise that a large number of both British and American studies have found a very strong correlation between educational attainment and interest in the arts. There is little doubt that the longer an individual remains in school the more exposed and refined become his tastes and preferences for cultural

pursuits. The number of individuals over the age of 15 who are involved in fulltime education has doubled in the past 10 years; hence the boom period the arts have been enjoying in North America. Higher educational status also has the effect of increasing one's propensity to participate in most minority sports, particularly swimming, tennis (Burton 1970), and outdoor activities which are of the traditional self-propelled form, for instance cross-country skiing and hiking (Wong 1979).

The recent 1979 Municipal census (referred to in Section 2.4.2) indicates that Fort McMurray's population is relatively more highly educated than it was in 1971. This shift is reflected in an increase in the proportion of individuals with post-secondary non-university and university education, and a corresponding drop of those with less than grade nine education. This trend likely will continue into the future as the Alsands project enters a construction phase, and expansion of the GCOS and Syncrude plants reactivates their construction phase. These developments serve to reinforce the trend toward the need for highly skilled workers and professionals for their projects.

With this shift toward a higher educated population, there will be a corresponding change in leisure opportunities preferred. To satisfy this demand, more intensive cultural and educational programming will be necessary. This includes arts and crafts, drama and music programs, as well as continuing and further education courses and more general public interest courses.

Additional facility space is also needed, not only to accommodate the cultural programs, but also to enable more formal cultural pursuits such as the theatre, museums, dramatic performances, and artistic displays.

With higher educational attainment, there is also a greater propensity to participate in the activities suggested above. This could indicate a need for more indoor and outdoor facility space for minority sports. As well, there is a need for cross-country skiing and walking trails to be developed in the open space areas surrounding the town.

4.1.3 Income

The relationship between income and leisure preference is similar to the relationship between education and preference. This relationship re-emerges because occupational attainment and resultant income are, in most cases, dependent on the level of education achieved by a given individual. Therefore, those with higher incomes have a higher propensity to become involved in cultural pursuits. As well, Burton (1970) indicates that high incomes are associated with high levels of participation in almost every sport, particularly swimming, water skiing, golf, tennis, and many minority sports.

Fort McMurray, with its technologically oriented oil sands industrial base, has a highly paid workforce. However, individuals who work in this sector are not highly educated. Burton (1970) points out that, when income rises rapidly (as would be the case when a semi-skilled worker started a relatively high paying job in the oil sands industry), an immediate shift in attitude toward culture as a leisure preference does not happen automatically. The individual must first adjust to his new standard of living before an interest in cultural pursuits is shown.

This, in part, could explain the burgeoning demand for cultural programs in recent years in Fort McMurray. It has now been more than three years since the brunt of the construction impact from Syncrude, and those who have remained during these years may be just now expressing an interest in cultural activities.

4.2 THE RESPONSE OF THE LEISURE DELIVERY SYSTEM TO COMMUNITY DEVELOPMENT

This section will focus primarily on defining what relationships, if any, exist between the growing population of Fort McMurray and the delivery of leisure services between 1972 to 1979. Using the inventory years of 1972, 1976, and 1979, an attempt will be made to understand whether the leisure delivery system responded directly to population growth and change, or whether growth of the system was a random occurrence.

4.2.1 Inventory Year: 1972

In 1972, Fort McMurray was struggling to recover from the impact resulting from the construction and operation of the GCOS facility. As the demographic data indicated, the population was extremely youthful and not highly educated. The following four subsections illustrate how the leisure delivery system responded to the needs of this fast growing community.

4.2.1.1 Facilities. Rapid expansion of a community spawns a variety of infrastructural needs. Services such as roads, sanitation, housing, and related social services outside the leisure field must also respond to rapid growth. The town must priorize so that decisions as to which services are to be upgraded first can be made. In this light, one can assume that leisure services would receive a lower priority than those which are required to satisfy basic human needs. Therefore, recreational facilities were not overabundant in 1972.

At that time, the Parks and Recreation Department was not a strong entity which could lobby effectively for recreational developments. Their function prior to 1972 was primarily of an administrative and programming nature. Between 1972 and 1976, the Department gradually began to focus on facility needs; however, these needs remained low priority issues as the town continued to upgrade other infrastructural needs.

Most facilities in place in 1972 were constructed in the pre-1972 era. The arena, curling, and swimming facilities were designed to service a much smaller population than the approximate 9000 people residing in Fort McMurray in 1972. Forthermore, most facilities were constructed to meet the needs of a youthful population (i.e., ball diamonds and outdoor rinks).

During this period, most outdoor activity facilities were constructed in school yards. This relates directly to a scarcity of open space in the Lower Town which forced construction to take place on these sites.

During the 1971 to 1972 period, the golf course and a ski facility came on stream. These projects did not come under the jurisdiction of the Parks and Recreation Department. In hindsight, it appears that the Department was focusing on meeting demands for essential neighbourhood level facilities, while other groups were providing the initiative for opportunities oriented toward more specific interests. Therefore, the Parks and Recreation Department was responding to neighbourhood level demand (as identified through the indicator variables).

4.2.1.2 Programs. To assess programs in 1972, a surrogate had to be employed. The surrogate, community groups involved in programming (Table 9), indicates that most groups were oriented toward providing sports and youth activities. Considerably fewer groups were providing services directly related to a specific social issue (i.e., Al-Anon). In 1971, very few groups were involved in cultural pursuits (i.e., the art clubs and the Overture Society).

This distribution of organizations is again consistent with what is known about the preferences as they relate to the demographic structure of Fort McMurray in 1972. The active nature of the majority of organizations is consistent with the youthful age profile of the town. One would also not expect cultural organizations to flourish in a situation where there is a high turnover of people as was experienced at this time. Furthermore, the lower levels of education attainment of the general population would not predispose the community to demand additional cultural programming.

If one accepts that the type of organizations found in Fort McMurray were representative of the types of programming available (this was the only source available for 1972), then some consistency does exist between the demographic data and programming. This consistency is the result of two basic factors:

1. The service organizations responded only to real demands from the local population and these demands

were consistent with what is known about demographic indicators and leisure preferences; and

2. The rapid growth of the community, and the rapid turnover of individuals, did not allow for a consistent base of interest in cultural activities to develop.

4.2.1.3 Open space. Information on open space in 1972 is sketchy. However, it is known that most open space was located either on MacDonald Island or in the community centre with little park space being found in the Lower Townsite or Waterways. Therefore, the community probably had adequate acreage of open space but little space which satisfied needs at the neighbourhood level.

The provision of open space, while not a totally random procedure, did not respond to demographic influence. Rather, it responded to the dramatic pressure for developable land (in the Lower Townsite) from the commercial and residential sectors. The scarcity of land in this area placed pressure on the Civic Administration to put all land into uses which returned the highest economic rent. Public open space has intrinsic social and aesthetic value but it does not have high economic value. Therefore, recreation and leisure open space could not compete with other economic land uses when the Lower Townsite was developing. The result was a scarcity of neighbourhood open space which exists to this day.

4.2.1.4 Private sector. Once again, instability in the community, resulting in an unstable market, probably kept the private sector from becoming too heavily involved in recreational development in 1972. At this time, only one commercial leisure establishment, the cinema, was in existance. Other private operators (i.e., pool halls, bowling, and amusement centres) probably saw Fort McMurray as too risky an investment prior to the Syncrude development period.

4.2.2 Inventory Year: 1976

In 1976, Fort McMurray was experiencing the height of the construction impact from the development of the Syncrude holdings. The community grew more than 111% between 1972 and 1976 with the bulk of the growth occurring in 1975. This influx changed the demographic profile of the town slightly. The community profile exhibited growth in the 20 to 35 age groups and a corresponding percentage drop in age groups between zero to 19 (see Table 3). These new residents were also generally more highly educated. This can be related to the influx of white collar and skilled technicians to Fort McMurray during this period.

When reviewing the individual aspects of the leisure delivery system, attention will be given to whether the system responded to the demographic change or other external factors resulting from the Syncrude development.

4.2.2.1 Facilities. Between 1972 and 1976, the number of recreational facilities in Fort McMurray expanded. More important than the expansion itself is the nature in which the expansion took place. The first characteristic of this expansion was that it did not keep pace with the explosive population increase. In terms of tennis courts and ball diamonds, there was only a marginal increase in supply. It is understandable why supply did not keep pace with population growth. Growth during this period simply outstripped the ability of the town to provide the needed active outdoor facilities. The inability to keep pace with rapid growth was a constant factor in many facets of the leisure delivery system. In the case of outdoor skating facilities, the supply actually dropped by three rinks. An additional indoor arena was constructed which should have alleviated the need for outdoor facilities and taken the pressure off the existing area. This facility was donated by Syncrude. Once this arena was constructed, it was operating at near capacity. The demand for this type of facility was growing faster than the town's ability to meet it.

During this period, the first of the leisure centres came on stream. The Gregoire Leisure Centre, provided by Alberta Housing, offered recreational opportunities to those residing in the Gregoire Park Neighbourhood. The leisure centres are an interesting phenomenon when considering the entire leisure delivery system. This centre, and those later provided by Northward Developments for Syncrude employees, were developed in cooperation with the town yet they exist outside the control of the Recreation Department. The Syncrude centres provide opportunities to Syncrude employees and their dependents only. There is no question that these facilities came on stream at a time when the Recreation Department was having difficulty in keeping up with the rapid pace of community growth and that these facilities helped alleviate part of this problem. However, in the longer term, as Fort McMurray matures as a service centre for future oil sands expansion, the factionalism along company lines that these facilities present could be a hinderance to Fort McMurray maturing beyond a resource community.

At the same time, a multi-use agreement was signed between the School Boards, the Recreation Board, and the Board of Administrators for the provision and use of public facilities. This immediately provided additional space for programming purposes which occurred as the result of rapid growth within the municipality.

In summation, the growth of Fort McMurray far outstripped the ability of the town to provide adequate leisure facilities. The Recreation Board also had to compete with other municipal agencies providing more basic services (health, sanitation, transportation, and housing) for funding. Three developments, the Syncrude donation of the Beacon Hill Arena, the Gregoire Leisure Centre, and the multi-use agreement helped keep the Recreation Board from falling farther behind the demand for these facilities.

4.2.2.2 Programming. As Section 4.1 indicated, the composition of the town's population changed during the 1972 to 1976 period. The generally higher educational attainment in the community manifested

itself in a diversification of the groups offering leisure programming. Many more cultural and craft oriented programs (such as music instruction, YMCA, chess club, painting and reading groups, folk dancing, square dancing, weaving and ceramics) began to appear.

The submission from many of the organizations (see Section 1.3.1.3) indicated that one of the key problems facing these groups was lack of space suited to the individual activities. Most groups required gym space or crafts room space. Both were in short supply. Therefore, many organizations had to settle for substandard locations. For example, Keyano College's ceramics course was held in a laundry room so that participants had access to the large tubs found there. Contact with these groups indicated that similar situations were not uncommon.

A second barrier to obtaining space existed because of the cost of space available through the multi-use agreement. To obtain space in a school building, the user group must pay both rent on the space and janitorial service (to keep the building open). For groups that do not generate substantial revenues, these charges are a real barrier to space utilization.

Programming for the Recreation Board, Keyano, and the YMCA also faced some special problems. The transient nature of the Fort McMurray population also meant that there was a high demand for introductory courses in a variety of fields. However, the demand for intermediate and senior courses was very low to nonexistent because most people did not stay in town long enought to graduate to this level of instruction. Therefore, the next influx of people usually would enter at the introductory level again, resulting in overcrowding of those particular programs. This had a negative impact on instructors who did not have the satisfaction of watching their pupils progress.

Contact with a variety of sources indicated that a critical gap existed in overall programming. If one views the age pyramid for 1976, it is apparent that 15 to 19 year olds are underrepresented relative to the population structure of Alberta. Whether for lack of numbers or priorities being placed elsewhere, there was a lack

of nonactive programs targeted directly at this group. There is little doubt that adequate sports programs existed. However, with the relative isolation of Fort McMurray and the length of winters, it is important to keep this age group occupied. Programming during this period appeared to ignore this group in an attempt to satisfy the needs of more predominant groups within the community.

4.2.2.3 Open space. This period saw the construction of two satellite neighbourhoods, Beacon Hill and Gregoire Park. Included in both neighbourhoods was an adequate open space network. Concurrently, the Lower Townsite continued to infill and open space continued to disappear. This was the beginning of the imbalance in neighbourhood open space within the community. The new neighbourhoods were planned with the open space component being an integral part of the design process while the old neighbourhoods continued to lose open space to development pressure.

4.2.2.4 Private sector. Little private sector expansion occurred during this period. From this, one must assume that an atmosphere of investment insecurity for this sector must still have been occurring at this time.

4.2.3 Inventory Year: 1979

While not growing at the rate experienced between 1972 and 1976, Fort McMurray still expanded rapidly during the period 1976 to 1979. Of the 73% increase in population during this period, the most dramatic increase occurred in 1977. Nichols (1979:56) indicates that this growth was the direct result of project operating employment from Syncrude and related growth in the service sector. The age-sex structure of the population still exhibits an imbalance toward young adults. Some indication of the maturing of the population is evident in the increase of older adults and a marginal decrease of children. Nichols also points out that this increase in operating and service sector employment offset a decline in the construction

industry which followed completion of Syncrude's construction phase. An employment shift of this nature can be equated to an expansion of white collar and specialized technical personnel and a decline of blue collar workers. This is reflected in the higher educational attainment figures which show that 41% of the population have some post-secondary education.

Income figures for 1979 indicate that a dual economy exists in Fort McMurray. A large portion (37%) of families in the town have a total income in excess of $30 000 annually while 11% earn less than $3000. This indicates that there is a significant group who are not participating fully in the oil-based economy of the region. The skewed nature of income distribution has distinct ramification for leisure programming as will be noted.

One factor common to the review of facilities, open space and programming is that growth in these areas was not only a direct result of growth during the 1976 to 1979 period. This point is made to ensure that the increase in leisure opportunities is not seen as just a response to growth over the preceding four-year period.

The analysis of the 1979 inventory will differ from that conducted for 1972 and 1976. Empirical data on participation and preferences in Fort McMurray have been made available for this study. Therefore, the data will be presented and followed by an analysis of its implications. Facilities, open space, programming, and private sector will thus be analyzed in light of these data and related demographic information.

Results of a study conducted in Fort McMurray in 1979 on recreational preference and participation were made available by G. Holman, University of Western Ontario, and these data have been useful in defining an up-to-date recreation situation in the town. Activities have been assessed as to user preference, and this, in turn, will aid in the establishment of standards and projection of future supply requirement.

While the data used have value in the assessment of facility service supply in Fort McMurray, it is recognized that a number of limitations result from the data collection methodology. The Fort McMurray preference and participation figures are based on questionnaires administered to heads of households, resulting in a general bias toward adults. Considering the high proportion of children and teenagers in Fort McMurray, this could have a considerable impact on the activity response lists. It was not possible to determine the representativeness of the sample as no profile data were generated.

The data presented here can be used only as general indicators of activity preference, as only one response was given by each interviewee. Therefore, no activities of equally high or secondary preference were indicated. This explains the low percentage levels on the preference response table. Conversely, responses to the participation section of the questionnaire included all activities in which the interviewee participated, as seen by the proportionately higher percentages on the participation table. Consequently, preference and participation data cannot be directly related. Furthermore, no data was generated on the quality of the recreation experiences available. This type of information, whether taken in the form of satisfaction or other surrogates, allows the researcher to make confident inferences on the existing supply-demand situation and the supply conditions preference. Without these data the analysis of facility provision which follows is very difficult.

As a result of the lack of quality of experience data, the incompatability between the methods by which the preference and participation data were generated and the underrepresentation of children and teens in the sample, only very general statements can be made. However, despite the limitations it is still preferable to attempt to use the data as it provides at least a partial empirical base for moving on to developing a facility supply standard.

4.2.3.1 Participation. Table 19 presents participation data for 22 recreational activities, ranked in order from the most to least frequented activities.

The data show a number of trends which appear to be associated with environmental resources, facility availability, community age structure, and phychological needs due to isolation. High on the participation list are activities which generate a sense of companionship and social interaction. Coinciding with this tendency are activities which bring the recreationist into close contact with the out-of-doors; again, the activities enjoyed outside also provide a means to interact socially.

Moderate levels of participation were recorded for sports which take the user into extremely remote country. Correspondingly, activities which require specialized facilities or programming had moderate to low scores. Solitary and strictly seasonal sports ranked the lowest. A review of specific activities and levels of participation will more clearly define involvement in recreational activities in Fort McMurray. This information will be considered with the demographic factors discussed earlier and geographical criteria (i.e., spatial distribution of neighbourhoods, climate) in the determination of facility and program provision levels.

Considering a possible bias in the data towards adult activities, the participation data show a number of priorities which may be unique to the Fort McMurray situation. The high level of involvement in indoor, social activities (taverns, dancing, cards) appears to signify:

1. A lack of availability of other opportunities;
2. A strong need and desire for contact with others; and
3. An influence generated by isolation and characteristics of the population.

Participation in outdoor and wildland activities strongly shows picnicking, fishing, canoeing-boating, hunting, and camping ranked within the 10 most popular pursuits. Passive pursuits which necessitate involvement on an individual or small group basis and activities which require equipment or a commitment to a club or team show low participation levels.

Table 19. Participation in Fort McMurray recreational activity.

Activity	Response	Ranking
Taverns	44.5	1
Swimming	43.4	2
Dancing	41.4	3
Picnicking	41.4	3
Fishing	38.8	5
Cards	31.7	6
Bowling	26.8	7
Biking	26.0	8
Canoeing-boating	24.5	9
Curling	23.4	10
Hunting	23.4	10
Camping	23.4	10
Skating	23.4	10
Fitness	18.5	14
Arts and crafts	18.5	14
Hiking	18.2	16
Cross-country skiing	17.1	17
Photography	15.7	18
Fastball	14.5	19
Golf	12.5	20
Tennis	12.5	20
Hockey	10.8	22

It is clear that Fort McMurray presents a special case to the recreation planner. Participation in all sports undoubtedly is increasing with the increase in population. It appears that the construction of leisure facilities and program development are unable to keep pace with the rapid population expansion. As a result, participation levels in many facility-oriented activities are low. If adequate facilities and programs were made available, participation in these activities may increase.

4.2.3.2 Preference. Preference for particular facilities relates to population structure. In resource towns, and Fort McMurray is a prime example, there is a preponderance of young, single males and an equally high proportion of young couples, many with children. These demographic factors have been discussed in Section 2, and need now to be related to preference ratings, supply of services, and participation levels.

Table 20 indicates, in decreasing order, the activities respondents designated as most preferred.

A number of activities which are freely available in the natural environment are highly preferred. They include camping, fishing, swimming, and hunting had high preference scores. However, canoeing-boating, hiking, and picnicking rated very low. Swimming is universally a highly preferred activity in all age groups.

Seventeen activities received preference ratings within the 5% to 11% range; however, there was a steady progression from most to least preferred. Indoor sports (raquetball, bowling, and curling) received relatively high scores within this range and reflect the desire of Fort McMurray residents to enjoy social activities on a year-round basis.

Family and community activities appear in the high, middle, and low range of the preference scale. Fastball, cross-country skiing, bicycling, golf, tennis, hockey, and skating all require at least a minimum of facility provision and reflect the preferences of the youthful majority. Indoor, social activities received very low ratings.

Table 20. Preference ratings for Fort McMurray recreational activity.

Activity	% Response	Ranking
Camping	20.8	1
Fishing	20.5	2
Swimming	20.1	3
Hunting	12.9	4
Raquetball	10.9	5
Arts-crafts	10.6	6
Fastball	10.2	7
Bowling	10.2	7
Curling	9.6	9
Cross-country skiing	9.2	10
Fitness	9.2	10
Biking	8.9	12
Golf	7.9	13
Tennis	7.9	13
Hockey	7.3	15
Dancing	6.9	16
Canoeing-boating	6.9	16
Hiking	6.6	18
Taverns	6.3	19
Skating	5.6	20
Picnicking	5.3	21
Cards	3.0	22
Photography	2.3	23

Dancing, frequenting taverns, and playing cards do not appear to be highly preferred activities in Fort McMurray according to the data. However, the low preference scores versus the previous high participation scores may be the result of two factors:

1. Tavern-going is not perceived as a recreation activity; or
2. A dissonance factor may be intervening and people will not admit tavern-going as a preferred activity.

As mentioned previously, passive (appreciative) outdoor activities (canoeing, hiking, and picnicking) received low preference scores. As the proportion of residents with high educational status continues to increase, these activities will show a corresponding increase in preference. Photography was preferred by the least number of people. This could be grouped with the preceding three passive activities as a low rating in a town where more active, outdoor sports appear to take precedence.

A review of the data indicates that preferences can be grouped in the following order:

1. Individual or small group, outdoor activities which could be classed under "wildland recreation" consumptive activities;
2. Organized indoor sports;
3. Individual or group outdoor sports - not wildland;
4. Indoor, social contact intensive; and
5. Solitary outdoor passive activities - appreciative.

4.2.3.3 Facilities. The availability of preference and participation data for 1979 allows us to view facility developments during the 1976 to 1979 period from a more empirical perspective. During the following review, the relationships which existed between facility development and actual participation and preference will be looked at.

The emphasis will be on assessing whether facility provision responded adequately to actual demand.

4.2.3.3.1 Swimming pools. Currently there is only one indoor swimming pool in Fort McMurray located in the Lower Townsite. Data presented earlier in Table 20 indicate that, outside of tavern-going, more people participate in swimming (43.4%) than any other activity. Moreover, swimming ranked third as a preferred activity with 20.1% naming it as their favourite activity. While many preferred and participated in this activity, 61.4% of those who participated swam only occasionally.

When one considers that there is only one indoor pool, the long cold winters, generally cold natural waterbodies, and a very high preference for this activity, it seems to indicate a frustrated demand for swimming opportunities. This opinion has been substantiated by personal contact with the Fort McMurray Recreation Department who feel that pool development is one of their highest priorities. Given these facts, it is obvious that the leisure delivery system did not respond adequately to this particular recreational need. This is especially true considering that the existing pool was constructed during the pre-1971 period. Given the dramatic growth that was experienced after the completion of this facility and the high utilization rates, it is apparent that a gap exists in this area.

4.2.3.3.2 Arena facilities. During 1978 to 1979, a new arena was constructed in the Thickwood Heights subdivision bringing to three the total number of indoor arena facilities in Fort McMurray; none of the arenas seat more than 500. Due to contract difficulties on the Thickwood Arena, the town has yet to make final payment and formally accept the building. While final acceptance has not occurred, some activities currently are being programmed into this facility.

The predominant users of arena facilities are hockey and figure skating groups. Tables 19 and 20 indicate that neither sport

is highly preferred or participated in. However, when one considers that the questionnaire was administered to adults and that children were not among the respondents, the low scores present a different picture. The majority of those involved in organized skating and hockey are children and teens, one of the largest age groups in Fort McMurray. Therefore, actual participation is probably much higher than indicated in the survey results.

In light of the above, there is little question that the Thickwood facility had to be brought on stream as quickly as possible. Furthermore, it is most important to bring on stream the new arena to relieve pressure at the two other arenas in the Lower Townsite and Beacon Hill.

As the Town of Fort McMurray matures, it will endeavour to compete in hockey competitions with other Alberta and Saskatchewan centres. Community participation (as spectators and organizers) will foster a greater identification with the community, a traditional problem in resource communities. At this time, the seating capacities of the arenas does not allow for major competitive events to be staged in front of a large spectator audience. Expanded seating capacities are also beneficial to figure skating groups for staging their year-end pageants.

Those involved in cultural programming would also benefit from increased seating capacity. This would allow them to schedule concerts and other cultural events. At this time, there is no facility which allows for the flexibility of accommodating a wide range of attractions for mass audiences.

4.2.3.3.3 Curling. In 1978, a new curling facility, housing 12 sheets of ice, was developed on the MacDonald Island complex. However, during the 1976 to 1979 period, the curling facility in the Lower Townsite was closed. Therefore, a net gain of only eight sheets of ice resulted. At the present time there are no firm plans for reopening the old curling facility.

The data indicate that curling was a realatively popular activity in 1979. It is both widely participated in (ranking ninth among activities surveyed) and highly preferred (again ranking ninth). This can be attributed to the social nature of the sport and the need for indoor activities during the winter months. Frequency of use data indicate that many people participate on at least a regular basis (44.6% participate weekly). Contact with MacDonald Island officials indicate that the facility is currently used to near capacity, with peak hours being solidly booked.

Curling can be considered a status sport and, with the rise in income and educational levels during the past three years, demand for this activity no doubt has risen. The closure of the old curling facility probably has meant that the leisure delivery system has fallen short in attempting to meet the demand for curling.

4.2.3.3.4 Golf. There was no increase in the supply of golfing opportunities during the preceding three-year period. However, to complement the nine hold (sand green) course, a major clubhouse facility was developed.

Golf falls into the minority sports category and, therefore, an increase in demand for this sport probably was experienced while supply remained constant. Demand and participation figures rank relatively low when compared to other activities. Moreover, use is predominantly on an occasional basis with 71% stating that they played less than once per month.

Given the absolute growth experienced in recent years, it is possible that Fort McMurray could have supported a full 18 hole golf course. This is especially true considering that nine-hole courses suffer from increased congestion resulting from individuals still wanting to play 18. An 18 hole course would accommodate the marginal increased demand while reducing the congestion which currently exists at peak times.

4.2.3.3.5 Tennis. The 1979 supply of tennis courts was 12 with six located at MacDonald Island, and three each at Peter Pond School in the Lower Townsite and at Beacon Hill. The development of the six MacDonald Island courts represented a doubling of tennis courts between 1976 and 1979.

If one considers tennis facilities to be neighbourhood facilities, then a problem exists with the distribution of supply. At the present time, there are two neighbourhoods which do not have tennis facilities. Therefore, the delivery system has managed to put an adequate number of courts on stream. However, they are distributed in a manner which causes an undersupply condition to exist in a number of neighbourhoods.

4.2.3.3.6 Field sports. During the 1976 to 1979 period, facilities for active outdoor sports dramatically increased. The number of fastball diamonds more than doubled (from eight to 19), soccer fields increased from three to eight, and a cricket pitch also was developed. This increase can be seen partially as the result of attempting to catch up with unfulfilled demand from pre-1976.

With reference to ball diamonds, it appears that supply actually may be beginning to catch up with demand. In terms of participation, it ranked only 14 among all activities. However, preference for fastball ranked number 7 overall. When the preference ranking begins to exceed participation, it indicates that there may be a frustrated demand. This frustrated demand would have to be accommodated by expansion in both fastball programming and marginal increases in facility development.

Soccer appears to have low participation (4.6%); however, soccer also is a victim of the questionnaire format as most of those playing the game are children. Considering the rapidly growing popularity of the sport with children and the size of the population under 12, soccer demand has escalated in recent years and can be considered to increase much farther in the coming years. The increase to eight in the number of soccer pitches has kept pace with the growth of the sport.

The growth in soccer pitches also has been of benefit to other sports such as rugger. The interest in rugger has escalated rapidly in recent years with Fort McMurray joining the Edmonton Rugby Union. The club has used these existing fields; however, if the sport continues to grow, a special rugger field may be required.

The development of a cricket pitch in 1979 indicates that the town has reached the point where community instability no longer is perceived by its members as being a barrier to establishing facilities for use by specific interest groups.

4.2.3.3.7 Boating. In 1979, no formal water access points existed in a community which is flanked by two navigable rivers. The access point on the Syne is characterized by very little formal development. The absence of a good boating facility is highlighted by the high participation in boating (eighth overall) and a high preference for outdoor activities in general. The data indicate that a marina or boating-oriented facility would be highly utilized by the community.

4.3 PROGRAMMING

The availability of a detailed inventory of programs for 1979 allows for a more complete examination of this aspect of the leisure delivery system to be conducted. This section will attempt to identify gaps which exist in the current program service and suggest how these gaps can be filled.

The following methodology was employed in this assessment:

1. The literature was surveyed and programming standards were identified (Section 4.3.1);
2. Present (1979) program offerings in Fort McMurray were reviewed with particular attention given to the development of program services since 1976 (Section 4.2.2.2); and
3. Present program services were assessed with respect to the information gathered in 1 and 2 . Gaps and critical areas in current programming were identified. Future changes to remedy the problem are discussed (Section 4.3.3).

4.3.1 Criteria for Program Development

Programming is the systematic ordering and directing of leisure opportunities. It provides leisure agencies as well as the community with a plan of what is to be done with leisure opportunities in the area. The form and specific offerings of program services depend to a large degree on agency function, citizens served, available resources, and program purposes. However, a review of the literature reveals a number of criteria for programming which can be applied to any community regardless of size or type. These criteria function as a guide to ensure that the approach to programming taken by each agency within a leisure delivery system ultimately exposes the community to a balanced variety of leisure opportunities. Butler (1959) and Sessoms et al. (1975) concur that program development must reflect a wide range of different types of activities for varying degrees of skill and ability. This ensures that individual differences in leisure preferences are satisfied and it enables individuals at various levels of skill to participate simultaneously. They also agree that programs should be of a progressive nature. Sessoms et al. (1975) state that an ongoing education effort is vital to the continued functioning of a leisure delivery system. Few people show a continuing interest in an activity unless they are afforded the opportunity to better their skills. This incentive to work toward levels of higher achievement maintains interest and participation in leisure programs. Sessoms et al. (1975) state also that programming should focus on the development of skills which will have value throughout one's lifetime, such as tennis, bowling, badminton, and archery.

Tillman (1973) stresses that programming should be based on the needs and interests of the community. It should be flexible enough to accommodate fads and changing interest but, at the same time, continue to maintain the traditionally proven and successful programs. He adds that there should be activities for all ages, both sexes, and all ethnic groups. He concludes that program services

should be sufficiently broad and well varied to ensure adequate opportunities for all types of people.

Tillman also believes that programming should strive to improve the program participants. Participation in a program should contribute to the improvement of health, mental awareness, and total fitness of the individual. He adds to this list "character improvement", which he defines as strengthening positive personality traits, developing respect for other's rights, and learning cooperation. He believes that the worth of a program should be assessed in terms of its effect upon human beings.

The literature on essential criteria for programs is extensive. What has been presented here is a summary of some of the most important planning considerations. They are useful as guides to developing program services that are equitable to all. Ultimately, however, the interests and expectations of the people served dictate program development. Provision of program services cannot be by the book, but must be in response to the factors that influence recreation behaviour.

4.3.2 1979 Leisure Programs Offered in Fort McMurray

Table 16 outlines the programs presently offered in Fort McMurray. The purpose of this section of the report is to review program offerings in order to determine if the aforementioned programming standards are being met. To simplify, programs have been grouped into three categories: sports, cultural, and social and special events. Though some experiences may be classified in one or more categories, most clearly fall into a distinct grouping. By using this method, each of the three types can be examined independently with respect to the standards. As well, the experiences can be reviewed collectively so as to reveal shortcomings in the program services of the leisure delivery system.

4.3.2.1 Sports programs. "Sports are the experience of challenge, man against animal, the elements, or other men, with physical exertion the primary identifying characteristic" (Tillman 1973:86).

Within this classification are included pure sports such as football, basketball, baseball, track, and hockey, as well as outdoor activities like fishing and hunting. Experiences which necessitate the use of machinery (i.e., snowmobiling, four-wheel driving, and car racing) represent a diluted form of physical experience but nonetheless also fall within the sports classification.

Presently, there are 49 sports programs offered in Fort McMurray. In 1976 there were 38. The increase is a result of more outdoor-related opportunities and more organized children's activities in the 1979 inventory. Most (26) of the 49 sports programs are open to any age group. As well, most (34) are either indoor sports or outdoor winter sports. Eighteen of the activities are organized team sports. Six of these are exclusively for the adult male (18 and over), and three for the adult female. Boys between the ages of six and 16 years also have three team sports to choose from; girls in the same age group have one. The remaining teams are open to any age group.

Fort McMurray residents have 10 organized outdoor recreation programs to choose from. Three of these are strictly winter sports (snowmobiling, skiing, and dog sled racing). The rest can be considered "all-season" sports (camping, horseback riding, four-wheel driving, etc.). One outdoor program (Outdoor Adventure) is geared to children 10 to 16 years old.

4.3.2.2 Cultural programs. Contained within this category are arts and crafts, music, drama, and further and continuing education programs. The cultural experience is defined by Tillman (1973) as the "prime area for individual and creative self expression". Although there is some overlap between cultural and social programming, the former emphasize the personal expression of a participant's ideas and feelings.

The key element, therefore, setting it apart from social programming is its individual and communicative orientation.

Presently, there are a total of 36 cultural programs offered. This is a considerable increase over the 12 offered in 1976. A key feature of the 1979 programming is the wide variety of activities. A concern for varying degrees of skill and ability is also evident.

There are 11 different types of arts and craft programs; three are for children (ages four to 12), one for teenagers (ages 12 to 16), nine for adults, including printing, painting, drawing, pottery, sculpture, and quilting. Although there are a number of dance programs, only three types are of a cultural nature: dancercize, creative dance, and interpretive dance. The remainder fall into the social category. Of these, one is open to all age groups, two are for children only, and one is for adults only. There is a wide variety of music programs, with nine different types to choose from, ranging from lessons on specific instruments (guitar, piano, etc) to group activities like choral groups and marching bands. There is also one music appreciation course and a music teacher's course. A majority (six) are for adults. The remainder are classified as open. There are 17 continuing and further education programs including shop crafts, general interest courses, languages, business administration, business education, and high school courses. Most are offered by Keyano College. The only exceptions to this are cooking and writer's guild. Except for these two, all are adult programs.

The significant increase in cultural programs between 1976 and 1979 was partly the result of expansion in programming by Keyano College. This growth also may be related directly to an increase in activity preference of the professional and higher educated segments of the population.

4.3.2.3 Social programs. This category is the most difficult to define as all recreational programming has a social aspect. Socialization occurs whenever people come together with mutual interests. The key feature setting it apart from the other two categories is

that these programs, in effect, bring people together in congenial, cooperative, and intimate participation in a common interest. The atmosphere is a relaxed one where "cooperation rather than competition is the essence" (Tillman 1973:132).

Programs which have not been mentioned previously include:

1. Polynesian Dancing;
2. Disco Dancing;
3. Square Dancing;
4. Comerford Dancers;
5. Scottish Country Dancers;
6. Scottish Highland Dancers;
7. Boy Scouts and Cubs;
8. Girl Guides and Brownies; and
9. Fort Flicks Film Society.

Programs already mentioned which could also be classified as social include:

1. Choir;
2. All School Marching Band;
3. Cafe Boreal;
4. Fort McMurray Theatre Live;
5. Theatre Unique;
6. Snowmobiling;
7. Four-Wheel Drive;
8. Summer Playground; and
9. Outdoor Adventure.

A majority of the social programs listed are for adults. Very few are for children and there are no programs of this nature which are solely of interest to the teenager.

4.3.3 Assessment of Present Program Offerings

The review of available programs indicate that Fort McMurray does have a wide range of sports activities available to its citizens. The leisure delivery system is capable of responding in the area of programming, unlike facilities or open space, because it is demand specific. To explain further, a demand is perceived by the programming

authority and, if an instructor can be found, offering the program presents little difficulty. Therefore, programming can be seen as one of the segments of the leisure delivery system which has managed to respond adequately to community need.

However, when reviewing the existing programs, one notes areas where there are deficiencies. These deficiencies stem from a marked deviation from providing what is considered an optimal mix of programs, or because a demand has not yet been met by new programs. Below, each of the three program types are reviewed with regard to possible deficiencies.

4.3.3.1 Sports programs. The following are six areas in which the existing sports programming may be improved:

1. At this time there are not enough team sports for women. From our review of programs it appears that there are only women's fastball and basketball programs. It would appear that this undersupply of programs would be an inhibiting factor to participation by large numbers of women in active sports. One area which could enhance active sports programming for women, and also add a winter component to women's sports, would be the introduction of ringette.
2. The preference data reviewed earlier in this section indicated a relatively high demand for wildland-outdoor activity. However, where viewed in its totality, the service exhibits the characteristics of an urban-oriented sporting program. While outdoor-oriented programs have increased marginally since 1976, they do not reflect the demand for outdoor-wildland activities. Programming could explore areas such as additional cross-country ski trails, hunter training courses, shooting classes run out of the rifle range south of the town, archery, water safety, and outdoor education courses. While most wildland activities take place outside of the

town boundaries, there is still the opportunity for the town or private groups to offer programs which can enhance the outdoor experience.

3. Many of the sports programs do not appear to be progressive in nature. Progressive refers to sports where the skill is learned at a low level and an individual progresses to higher level competition over time. Skill development of this nature is essential to assure the opportunity for continued participation and increased enjoyment of the activity. One can infer that sports programming in Fort McMurray was static (non-progressive) because of the high rate of transiency and, therefore, a sports programming service evolved which dealt specifically with limited age groups at a fixed level of skill. However, as the community continues to mature and individuals make Fort McMurray their permanent home, the demand for progressive programming will increase. At this time, there are more progressive sports programs for men than women. Men's fastball, soccer, and hockey all have minor league components. Only women's fastball has a minor league for girls.
4. Although there are a number of lifetime sports in the present program services, this type of program should be given more emphasis in the future. This need for increased emphasis is based upon an assumption that the Fort McMurray population will not always exhibit the very youthful profile which it now displays, and of a general increase in leisure time in the future for all age groups. At this time most programs for children are not oriented toward lifetime sports. They are being groomed to develop skills in sports which most likely will not continue past their teenage years.
5. For teenagers, sports participation with their peers is critical. In Fort McMurray there are inadequate

opportunities, especially for girls, to engage in this type of activity. Programming solely for teenagers is essential for skill development and peer group contact. Most programs in Fort McMurray are for adults, with those classified as "open" being available to teenagers. This type of teen programming should not be considered in isolation. Teen programs should be an extension of a comprehensive progressive programming service.

6. Most sport activities available in Fort McMurray are oriented toward specific age groups or are structured for individual participation. Both of these conditions act as barriers to total family participation. Such family opportunities could become increasingly important given the large number of young families in the community.

4.3.3.2 Cultural programs. Generally speaking, cultural programming is very good. Essentially, this type of programming is highly demand specific, with the most successful programs developing out of an expressed interest from specific groups. When programs are introduced without this type of popular demand, the community is very slow to accept the new activity.

As was mentioned above, cultural programming is quite good. However, deficiencies, similar to those discussed with sports do exist:

1. Programs should be progressive in nature. Individuals should be afforded opportunities to better their skills. As the literature indicated, this type of incentive maintains interest and participation. Furthermore, if activities are offered in beginner, intermediate, and advanced levels, individuals can enter the programs at a level commensurate with their skills. This is especially important to beginners who may be inhibited or frustrated by being placed in a class with advanced skills.

The lack of truly progressive cultural programming is not an oversight by programming staff. Rather, it reflects the high degree of transience exhibited in past years by the community itself. It was found that enrollment in beginner's courses was high, but persons were not staying in town long enough to generate interest to offer courses at an advanced level. However, this should not inhibit programmers from attempting to develop a progressive programming system, especially in light of continued community maturity.

2. Although there are a number of programs for children, they do not offer many opportunities beyond the conventional activities such as creative crafts or preschool crafts; painting, drawing, and sculpture are activities which children can be introduced to at a very early age.
3. There are only two programs for teenagers: macrame and cooking.
4. There are no music courses at all for children. However, private music lessons, which are not included in this inventory, likely satisfy some of this demand. There should be some public programs for people who cannot afford the high cost of private lessons.

4.3.3.3 Social programs. Due to the very nature of these activities, it is difficult to analyze them for deficiencies. Social programs develop out of a common bond of interest among "desirable companions". The role of the public recreation system in this type of programming is to provide the opportunity for social situations to develop. This can be done by offering programs where:

1. Skills or acquiring knowledge is not the prime objective;
2. Family recreation is encouraged; and
3. Cooperative rather than competitive behaviour is emphasized.

4.4 OPEN SPACE

An assessment of open space provision in Fort McMurray indicates that there is no set standard of supply for either the old town or new neighbourhoods. In 1979, there was no change in open space supply in either the Lower Townsite or Waterways. Open space was left during construction of new housing developments; however, this consists predominantly of cleared areas surrounding, not within, the subdivisions. With reference to passive open space, the undersupply situation in the Lower Town has not improved since 1971.

Some internal open space has been left within the new Thickwood Heights area, but this is underdeveloped. A major undersupply of park space exists in the old neighbourhoods and this situation does not appear to be improving. Generally, neighbourhood open space does not seem to be changing despite the rapid growth in population.

Furthermore, there is a need for community-oriented park space. Such a park could meet the stated preference for picnicking in addition to providing a needed community focus.

The preference data also indicate a preference for outdoor-related activities. Areas within the open space areas could be developed for cross-country skiing, or walking and jogging trails. Further analysis of both neighbourhood and community open space requirements are dealt with in the following section.

4.5 PRIVATE SECTOR

As Fort McMurray matures, private enterprize is increasing to take advantage of the growing recreation industry and profit-making potential.

The participation data indicated that highly social events such as tavern-going and dancing are appealing to this predominantly youthful community. The private sector responds to meet this demand in the form of four public bars in town and dance space in taverns. Programming has also responded by offering courses such as Polynesian dancing. Given the nature of these type of activities, it is within

the realm of the private sector to respond to the demand. Therefore, no assessment is made on shortfall in this area.

Bowling, a popular sport in Fort McMurray, can be played year-round, and is particularly suitable as a winter activity. Bowling is popular with residents with all levels of educational and professional attainment and, as such, will always be highly preferred in Fort McMurray. On both preference and participation lists, bowling ranked fairly high, indicating that this activity will grow at a constant rate to match the community's expansion. Entrepreneurs, therefore, undoubtedly will supply the necessary facilities to meet this demand.

In 1979, four raquetball courts were available at the MacDonald Island facility, one at River Park Glen Leisure Centre, one at Father Beauregard Centres, and seven at the privately-owned and operated Matchpoint Court Club.

While data are lacking on current participation rates, preference information shows that raquetball is the fifth most preferred activity in Fort McMurray. Furthermore, fitness ranked tenth on the preference list. In combination, the high preferences for both raquetball and fitness and, given the long winters in Fort McMurray, the status natures of these activities lead to the assumption that participation rates will grow in excess of community growth rates. Therefore, current supply can be considered the limiting factor to participation in the activity. Raquetball is an activity for which users exhibit a willingness to pay for use of courts. Therefore, rather than burden the public with the expense of facility development, the private sector should be encouraged to become involved in ventures such as court clubs from which profits can be realized.

During the 1976 to 1979 period, the indoor cinema was twinned, thereby effectively doubling the supply. A drive-in theatre was also developed during this period. This activity falls entirely within the domain of the private sector and the provision of cinemas can be left to their discretion.

A 575 seat theatre is presently under construction at Keyano College. It is due to be completed by May 1980. The facility will consist of a stage, seating area, props room, and theatre manager's office as well as a multi-purpose room, boardroom, and a band room. The theatre will be used by Keyano College, Fort McMurray Composite High School and the community at large. The details of the joint-use agreement have yet to be decided on. This community facility will be a great asset to Fort McMurray in terms of staging cultural productions originating from the community as well as from outside Fort McMurray.

4.6 LEISURE SERVICES IN THE UNINCORPORATED COMMUNITIES

The present leisure services provide the basic framework for future improvement or implementation of leisure activities, thus the current level of provision is important. Generally the present level of leisure services provided in the three unincorporated communities appear to meet only the basic requirements for recreational and cultural needs. These have been described in Section 3.6.

Each of the communities has its own priorities as to immediate requirements. These have been outlined previously and will not be discussed here. What has been identified as being the most important factor of current and future leisure service provision in the three communities is the willingness of the local residents to participate actively in the selection, initiation, and supply of leisure services.

To date, the local Recreation and Culture Boards have not played an overly active role. Leisure services have been provided mainly on an informal basis which has been able to maintain a slow but steady supply of activities. However, with the possibility of regional changes, in terms of population, employment, standard of living, etc., the provision of leisure services may be required to formalize.

The current level of leisure services, with some adaption and fulfillment of identified immediate needs, can provide a basis for an expanded leisure system in all three unincoporated communities.

4.6.1 Population Growth

It is anticipated that the three unincorporated towns of the region will not bear the brunt of the projected increase in population within the study area. Fort Chipewyan will not benefit directly from industrial growth in oil sands development due to its peripheral location and lack of a road link.

The recommended growth policy for the study area is to direct new populations to a proposed new town, to be located near Fort Hills, or to allow Fort McMurray to maximize its regional centre status by absorbing incoming populations. Therefore, population increase in the traditional communities of Fort McaKay and Anzac is expected to be minimal. This is not to say that impacts derived from population growth will not be felt in the local leisure service systems, but that the provision of such services will not be subject to the intense pressure recently experienced by Fort McMurray.

The Town of Anzac will continue to be involved in the wider regional aspects of leisure services due to its proximity to Gregoire Lake, the Provincial Park located on the lake, and several youth camps in the vicinity. Therefore, some of Anzac's local facilities, i.e., day use area, may be utilized by a regional population. In planning for future leisure services in Anzac, this regional component must be recognized, not so much in program development, but in the provision of outdoor recreation facilities (i.e., picnic areas, cross-country ski trails).

The Town of Fort MacKay no doubt will be affected by the construction of a new town to service the proposed Alsands Project. It is unlikely, however, that the local leisure facilities and programs will be subject to direct pressure from nearby population growth. In fact, some future leisure needs of the community may be met by those services provided in the new town.

As far as population growth is a factor in leisure service development, the communities should be concerned with meeting immediate deficiencies and planning for the future should be based on increasing regional populations rather than increased local populations.

4.6.2 Integration of Local Services and Regional Development

The direction of population growth outlined above emphasizes the need for integrating local facilities and services within the greater regional scale of recreation and cultural services. As the regional population increases, leisure services still should be oriented toward local use but also should recognize the very real possibility of increased regional use. This can best be accomplished in the unincorporated communities by emphasizing outdoor recreation developments beyond the side of local use and providing links to other nearby recreation areas.

For example, increasing participation rates in snowmobiling, off-road vehicles, boating, canoeing, hiking, and cross-country skiing will require a greater number of developed areas and facilities. By integrating trails, access corridors, and day-use areas within a regional plan, certain specific leisure needs of both local and regional residents will be satisfied.

Not all leisure services can be incorporated on a regional basis but, since it is the regional population rather than the local population which will produce a strain on the future leisure system, it is suggested that as many local services as possible be integrated with regional interests.

5. RECREATION STANDARDS

The purpose of this section is to develop standards for neighbourhood and community open space and facilities. Recreation standards represent relative requirements for the provision of leisure opportunities. When used properly, standards can be one point of departure for estimating and evaluating the following:

1. The amount of land and facilities required to serve a population and subgroups within the population;
2. The number of people a given recreation area, facility, or system can be expected to serve adequately; and
3. The adequacy of an area, facility, or system to accommodate the potential users in its service area (Gold 1973).

A review of the literature indicates that most authors view standards only as planning guidelines to be used with sensitive discretion. This cautious approach reflects a concern for the way in which standards have been used in the past. Gold (1973), in a review of recreation plans involving the use of standards, found that planners were often applying the same standards to a wide range of planning areas. This was done regardless of "the different demographic, recreation resource, fiscal, and climatic variables" (Gold 1973:158). It since has been found that direct transference of standards between communities is inappropriate because each community represents a unique situation with respect to the type of leisure opportunities required.

5.1 FACTORS AFFECTING THE DEVELOPMENT OF STANDARDS

To develop effective standards, individual communities must be perceived as being unique entities. The literature indicates that this uniqueness is a result of the interactions of the following variables:

1. The goals, objectives, and policies of the agencies involved in the provision of leisure opportunities. Standards must be acceptable and usable to the practitioner and policy maker. They must also be

reasonably attainable within the agency's financial and administrative capabilities. The goals of the private agencies should be examined so as to reduce duplication of services;

2. The economic resources of the community;
3. The topography of the community. This includes the extent to which physical barriers limit accessibility to leisure services;
4. The socio-economic characteristics of the community. Standards must be adapted to locally expressed needs, to local values and interests. This includes examination of age and sex characteristics, income levels and types of living units, all of which influence the user-preference for leisure opportunities; and
5. The climate of the region. Consideration must be given to supplying standards that are consistent with climatic constraints to participation.

5.2 PROBLEMS ASSOCIATED WITH STANDARDS

In attempting to utilize standards, one must be cognizant of problems which can stem from an inaccurate perception of the function of standards. The literature reveals numerous cases where planners have interpreted standards as explicit directives for the provision of leisure opportunities. To compound the problem, standards also have been seen as top end figures to be reached. To overcome these problems, standards should always be flexible so that they can be altered easily to reflect changes in the demographic structure and economic resources of the community. As well, standards should not be treated as an end, or a figure which must be met. Instead, they should be considered as a minimum figure upon which the planner should attempt to improve.

5.3 THE NEED FOR COMMUNITY SPECIFIC STANDARDS

The purpose here is to examine the gaps in leisure service provision which were identified in Section 4 and determine, through the use of standards, the present leisure servicing requirements. In Section 6, long-range requirements will be identified and the standards will be used to determine the leisure resources to be developed over the next five years.

The current approach to the use of standards emphasizes that, to be truly effective, standards must be an expression of the goals and needs of the community in which they are applied. As Clawson (1966) points out, "standards can never be rigid...and are meaningful only within the context in which they are developed'. Standards used by other communities can serve as planning aids or guidelines. However, the development of standards should be contingent on the tailoring of these guidelines to meet the needs, goals, and resources of the community in which they are applied. This includes both the specific needs of the community and the goals of the agencies involved in the primary provision of leisure services. The method employed in this study takes into consideration population characteristics, local economy, climate, and existing levels of service in Fort McMurray. Considerations will be given to the varied characteristics and recreation needs that exist in each of the six neighbourhoods and standards applicable to each will be developed.

Facility and open space resources will be assessed at both the community and neighbourhood level. As indicated in the following definitions, the type of service offered at the two levels is distinctly different.

5.3.1 Community Level

If one was to consider recreation opportunities in a hierarchy, then community facilities would maintain a place at the top. These are the opportunities which are significant enough to attract users from the entire community where individuals would

be willing to make special purpose trips to engage in these pursuits. The community opportunity retains this position by either being:

1. Too expensive on a capital cost basis to provide at the neighbourhood level; therefore, by virtue of providing only one facility it achieves a position of significance; or
2. The opportunity is an extension of opportunities offered at the neighbourhood level and, therefore, they provide a higher level of experience (i.e., major competition ball diamonds or a community park).

5.3.2 Neighbourhood Level

The goal of providing neighbourhood facilities is to make facilities and spaces available to all members of the Fort McMurray community by providing basic activities within walking distance of their place of residence. If one considers capital cost as a criterion for differentiating between community and neighbourhood facilities, then neighbourhood facilities must be considered a lower tier of development. However, the fact that the cost of implementation and maintenance is lower does not distract from the fact that these facilities provide both needed leisure opportunities close to home, plus the opportunity to develop skills so that completition on the intermediate and senior levels is possible.

5.3.3 Programming

The present function of the private sector in providing leisure opportunities has been reviewed in Section 4.5. Standards are not applicable to this component of the system because provision of opportunities by commercial and private agencies is dependent on the supply-demand situation and the availability of non-priced recreation provided by public agencies. The future role of the private sector will also be discussed in Section 6.

5.3.4 Private Sector

Standards for programming will not be developed as they are not a useful method of predicting future needs. As indicated in Section 4.3, programming is demand specific and must be very flexible and adaptable to the changing interests of the resident population. With this in mind, Section 6 will establish long-range program guidelines which are based on the present demand for programs and the current provision of leisure opportunities.

5.4 COMMUNITY FACILITIES

Included in Section 4.2.3.3 was a general analysis of the supply-demand relationship which existed for various community facilities. Despite the limitations of the analysis, the supply-demand relationships identified provide a base from which community specific standards can be developed.

The understanding of the interaction of these supply-demand, demographic, and geographic variables will be used in this section to adjust average Canadian standards for community facilities to reflect the unique needs of Fort McMurray residents. Based on the present supply of facilities, guidelines will be established to indicate the facility requirements for a population of 27 000 (see Table 21).

5.4.1 Swimming Pool

The Fort McMurray swimming pool is presently operating at capacity. The preference and participation data (see Tables 18 and 19) indicate that this is a highly preferred and very popular leisure pastime. In order to accommodate present and future demand, an additional swimming pool is required.

The standard for indoor pools set by the Ontario Ministry of Recreation (1976) is one per 20 000 population (25 m swimming tank with an average bathing capacity of 200). However, this standard should be altered to reflect the special conditions in Fort McMurray. Given the rapid population growth, and universal popularity of swimming, it would appear a pool of the size

Table 21. Community recreation facilities, Fort McMurray, 1979.

Existing Community Facilities, 1979	Additional Community Facilities Required, 1979
1 Swimming Pool (bathing capacity 250)	1 (bathing capacity 300)
3 Arenas (seating capacity 500)	1 (seating capacity 2000 to 3000)
12 Sheets curling ice	6 sheets
1 Golf course (nine holes)	
2 Baseball-Fastball parks	
1 Boat launch	1 marina
1 Library	
1 Museum	1 museum-nature centre

recommended above, in addition to the existing pool, would satisfy demand until Fort McMurray population reached approximately 35 000 to 40 000 people[1]. To extend the supply period of the pool, consideration should be given to constructing a larger facility with a bathing capacity of 300. Consideration should also be given to developing the pool as part of a multi-purpose recreation complex containing amenities such as saunas, exercise rooms, and an outdoor pool. This would increase the attractiveness of the facility as well as provide more opportunities for indoor winter activity.

5.4.2 Arenas

Section 4.2.3.3 indicated a need for a facility to satisfy intermediate and senior levels of hockey and figure skating competition. A facility for this purpose would require a 2000 to 3000 spectator seating capacity.

The present level of provision of arenas in Fort McMurray is very high relative to standards in other communities. The Edmonton standard is one per 31 000 and the average level of provision in Ontario is one per 20 000. However, considering the need for indoor winter activity in the community, the existing one per 9000 service level is currently an adequate supply. This is confirmed by several groups in Fort McMurray who have indicated that there is an ice shortage especially during prime hours. One group, the Noralta Figure Skating Club, feels that their needs can be satisfied best by a new facility. In a draft presented to the Recreation and Culture Board in August 1979, the club proposed the renovation of the old curling rink in the Lower Town as a practise surface for the club and as a clubhouse facility for executing meetings, general meetings, judges seminars, and classes etc.

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[1] *An indoor pool with a bathing capacity of 200 serves a population of 20 000, a pool with a bathing capacity of 300 serves 30 000* [*Ontario Ministry of Culture and Recreation (1976:40)*].

Aggravating the existing frustrated demand for arena facilities is the projected rapid population growth and the trend toward permanent settlement of families with young children and teenagers.

It would appear that present and future demand for skating opportunities could be satisfied through the development of a new arena within the next two to three years, with amenities to accommodate all major skating events (i.e., the Gala Event) in the community. This new arena could provide the necessary clubhouse facilities to accommodate intercommunity hockey and skating competitions. The provision of this facility would increase significantly the amount of indoor ice time available in the community, thus relieving pressure on existing arenas. It would also attract major spectator events to the town.

5.4.3 Curling

The demand analysis (Section 4.2.3.3) indicated that intensely social organized indoor sports were highly preferred by Fort McMurray residents. Curling appears to fit into this category of preferred sports because of its value as both social and family-oriented activity and the fact that it is an indoor, year-round sport and is not directly affected by inclement climatic conditions.

Presently there is one curling sheet per 2250 people. The community's only curling facility is located at McDonald Island. This facility is currently operating at near capacity during the peak season. Given the need for indoor social activities during the long winters, the expressed desire for social recreation experiences and the current usage of the McDonald Island facility, the level of provision should increase to one curling sheet per 1800 people.

The present level of provision is one major athletic park per 1500 people. The standard, recommended by the City of Edmonton, for a similar facility is one per 30 000 people and the

Ontario Ministry of Culture and Recreation recommends one per 20 000 people. Since the facility in Fort McMurray is presently not used to capacity, a new one is not necessary at this time. It would appear that the standard of one per 20 000 is applicable to Fort McMurray's present needs.

The upgrading of existing fields for competitive sports, such as soccer and football, is planned. The standard recommended by the same agencies for soccer-football fields is also one location per 20 000. However, as soccer is a relatively new sport to the town, most participants are still at the beginner level and there is no need as of yet to increase supply beyond the planned developments.

5.4.4 Major Athletic Parks

The town has one major athletic park located on MacDonald Island. It has amenities to accommodate intermediate and senior levels of baseball and fastball competition which include lighting, fences, backstops, dug-outs, and spectator seating.

5.4.5 Boating

The Athabasca and Clearwater rivers provide excellent boating opportunities. As an outdoor leisure opportunity, boating is a highly preferred activity in Fort McMurray. Presently, there are no formal boating areas in the community. Given the high preference ranking for outdoor activities and the Alberta Forestry campground and day-use developments on the Clearwater River, one fully developed marina is required. When demand exceeds the capacity of this facility, the private sector should be encouraged to supply further opportunities.

5.4.6 Golf

Demand and participation data for golf show a low ranking relative to other activities (see Table 18). Although the existing nine-hole facility is well used, the demand figures indicate that

expansion to an 18 hole course is not a development priority at this time.

The level of provision recommended by the Ontario Ministry of Culture and Recreation (1976) is one 18 hole course per 30 000. Based on the demand data and the present use of the nine-hole course, this standard is applicable to Fort McMurray. It indicates that an expansion of the existing facility is required in the near future.

5.4.7 Arts and Crafts Facilities

An increasing interest in cultural programming is evident in the community. As indicated in Section 4.2.3.4, cultural program opportunities increased threefold between 1976 and 1979. In the preference survey, arts and crafts received a low participation ranking, however, it was a highly preferred activity (see Tables 18 and 19). This appears to indicate that community residents would participate more if opportunities were provided.

To increase arts and crafts programs, more facility space will be required. Several groups have indicated a need for more space. Personal contact with Jill Hodgson, Cultural Coordinator, revealed that there is a great demand for more accessible space which can be obtained at minimal rental and maintenance costs.

New cultural facilities for this purpose are not necessary at this time. Demand can be accommodated within the existing community infrastructure. Weekend, evening, and summer use of the school facilities can be improved. The Father Beauregard Centre can also accommodate more use.

To increase the use of schools by the general public, the rentals collected for cultural programming can be used to make the higher priced, existing facilities more accessible. New groups and groups with cash flow problems can be directed toward low cost space such as the Beauregard Centre.

In developing new community facilities such as an arena and swimming pool, space should be set aside to accommodate future

cultural programming demand. The multi-purpose use of facilities reduces operating costs and increases its attractiveness to users. The possibility of combining facilities makes standard development unwarranted.

5.4.8 Library

The new Fort McMurray library is scheduled to open within one year. The purpose of this facility is to both service Fort McMurray and act as a base for an integrated library system which will supply the entire region including the New Town. This method of supplying library services uses branch libraries and bookmobiles to expand the service of the main centre. Therefore, the standard for libraries is one main centre per region.

5.4.9 Nature Centre

The purpose of Heritage Park is to interpret the historical development of the region. It is currently the major interpretive facility in the area. A planning study is underway to investigate alternatives for a nature centre which will emphasize the natural history of the region.

The natural history museum and nature centre combination provides a variety of learning opportunities, including studies in conservation, ecology, etc. The standard for this type of facility is one per community.

5.5 COMMUNITY OPEN SPACE

Most of Fort McMurray's existing community-oriented open space is found on MacDonald Island. However, this space is used primarily for active leisure pursuits (the exception being the pavillion which is used for social gatherings). The town has additional community open space in Heritage Park, however this site is oriented toward cultural interpretation. Therefore, there is an apparent lack of community space dedicated solely to passive pursuits such as walking and picnicking. Furthermore, the preference data (Section 4.2.3) indicated a strong desire for picnic areas.

The creation of a centrally located community park would satisfy this need for passive community open space. One possible means of accommodating this demand would be to convert some of the undeveloped waterfront lands to attractive open space. For example, the riverbank areas in the Lower Townsite north of Clearwater Drive, adjacent to the Syne, and those on the outer fringes of MacDonald Island have potential as passive recreation areas.

The user preference data also reflected a high demand for outdoor pursuits. Walking trails with fitness stations could be cut through the wildlands surrounding various neighbhourhoods in Fort McMurray. These trails could double as cross-country ski trails during the winter. User conflicts between cross-country skiers and snowmobilers currently occur on the existing trails adjacent to the newer neighbourhoods. Future trail development should seek to eliminate these conflicts by providing two distinct trail systems which would separate the two groups.

Fort McMurray's open space system already includes the Heritage Park "themed cultural" park. Therefore, there is no need to expand this aspect of the system.

5.6 SPECIAL CONDITIONS AFFECTING DEVELOPMENT OF NEIGHBOURHOOD STANDARDS

Section 3 discussed how social and demographic characteristics influence leisure preferences. Tables 22, 23, and 24 indicate that the population of each neighbourhood in Fort McMurray is different with respect to age structure, education, and dwelling type (data for income were not available at a neighbourhood level) which indicates that each neighbourhood has unique recreation needs. Prior to development of the standards, factors affecting their development are reviewed. First, conditions common to all neighbourhoods are discussed; second, each neighbourhood is reviewed separately so that the uniqueness of each neighbourhood is reflected in the standards.

Table 22. Age distribution of each neighbourhood, Fort McMurray, 1979.

Age	Lower Town	Waterways	Beacon Hill	Gregoire Park	Thickwood Heights	Abasands	TOTAL
0-4	896 9.3	80 12.3	278 11.4	373 15.2	714 13.5	406 13.6	2747 11.7
5-9	876 9.1	53 8.2	349 14.3	285 11.6	786 14.9	418 14.0	2767 11.8
10-14	924 9.6	59 9.1	359 14.7	196 8.0	617 11.7	295 9.9	2450 10.4
15-19	1077 11.1	52 8.0	222 9.1	159 6.5	413 7.8	209 7.0	2132 9.0
20-24	1731 17.9	128 19.7	127 5.2	348 14.2	419 7.9	384 12.9	3137 13.3
25-29	1254 13.0	95 14.6	228 9.3	419 17.1	657 12.4	445 14.9	3098 13.2
30-34	971 10.0	55 8.5	295 12.1	280 11.4	707 13.4	373 12.5	2681 11.4
35-39	598 6.2	37 5.7	238 9.7	144 5.9	440 8.3	207 6.9	1664 7.0
40-44	488 5.0	24 3.7	153 6.3	104 4.2	246 4.7	123 4.1	1138 4.8
45-49	319 3.3	17 2.6	85 3.5	58 2.4	138 2.6	70 2.3	687 2.9
50-59	389 4.0	36 5.6	89 3.6	58 2.3	118 2.2	42 1.4	732 3.1
60-69	115 1.2	10 1.6	20 0.8	21 0.9	18 0.3	7 0.3	191 .8
70+	35 0.4	3 0.5	3 0.1	5 0.2	8 0.1	3 0.1	57 12
TOTAL	9673	649	2446	2450	5281	2982	23481

Table 23. Educational attainment by neighbourhood, Fort McMurray, 1979.

Education	Lower Townsite	Waterways	Beacon Hill	Gregoire Park	Thickwood Heights	Abasand Heights	Total
1 - 6	97	18	11	9	23	11	169
	1.0	4.2	.8	.7	.8	.6	1.2
7 - 9	738	74	165	151	295	214	1637
	11.3	17.6	11.7	9.9	9.9	12.1	11.2
10 - 13	2856	233	646	413	1497	1054	6699
	43.9	55.3	45.7	27.0	50.2	59.6	45.8
Post Secondary	2215	72	370	844	814	353	4668
	34.1	17.1	26.2	55.0	27.3	20.0	31.9
University Diploma	601	24	223	115	352	137	1452
	9.2	5.7	15.8	7.5	11.8	7.7	9.9
Total	6507	421	1415	1532	2981	1769	14625
	44.5	2.9	9.7	10.5	20.4	12.1	100.0

Table 24. Dwelling type by neighbourhood, Fort McMurray, 1979.

Dwelling Type	Community						
	Lower Townsite	Waterway	Beacon Hill	Gregoire Park	Thickwood Height	Abasand Heights	Row Total
Single Family	974	75	498	0	914	28	2489
	24.8	24.4	70.5	0.0	52.1	2.6	29.0
Semi-Detached	162	4	39	0	258	57	520
	4.1	1.3	5.5	0.0	14.7	5.3	6.0
Townhouse	175	0	130	0	456	685	1446
	4.4	0.0	18.4	0.0	26.0	63.4	16.8
Apartment	1954	11	0	0	114	310	2389
	49.7	3.6	0.0	0.0	6.5	28.7	27.8
Mobile Home	635	214	39	814	7	0	1709
	16.1	69.5	5.5	100.0	0.4	0.0	19.9
Other	34	4	0	0	6	0	44
	0.9	1.3	0.0	0.0	0.3	0.0	0.5
Column Total	3934	308	706	814	1755	1080	8597
	45.8	3.6	8.2	9.5	20.4	12.6	100.0

5.6.1 Factors Common to All Neighbourhoods

The spatial distribution of the neighbourhoods in Fort McMurray also has a considerable impact on the development standards. Distance and physical barriers impose restrictions on mobility between neighbourhoods resulting in their becoming somewhat isolated from each other. Thickwood Heights, Abasand Heights, and Beacon Hill are each separated by river valleys with very steep embankments. These three neighbourhoods are in turn separate from the Lower Townsite, Waterways, and Gregoire Park by Highway 63. Highway 63 also separates Gregoire Park from Waterways. Waterways and the Lower Townsite are closer to each other than the other neighbourhoods but are also separated by the Hangingstone River. Travel between neighbourhoods is further limited by the absence of a public transportation system.

If the definition of neighbourhood-oriented recreation put forward earlier is accepted, then each neighbourhood must be considered a separate entity as individuals will have difficulty gaining access to facilities in adjacent neighbourhoods by walking. To satisfy demands for basic active recreation needs in this very young community, a core set of facilities including tennis courts, ball diamonds, soccer-football fields and ice rinks, and open space such as tot lots, neighbourhood parks and playfields should be provided in each neighbourhood. This ensures that there is an equitable distribution and, therefore, equal access to resources among these spatially segregated neighbourhoods.

Actual determination of the quantity of facilities and open space required beyond the core level is dependent on the demographic characteristics of each neighbourhood. These characteristics are reviewed below.

5.6.2 Neighbourhood Characteristics

5.6.2.1 Lower Townsite. The Lower Townsite exhibits the most normal (as compared to the Province of Alberta profile) population

distribution of all the neighbourhoods in Fort McMurray. It is important that active and passive forms of recreation in this neighbourhood suit the needs of all age groups. Some community facilities for active recreation already exist in the Lower Townsite. The most critical problem is the definite lack of passive open space.

The Lower Townsite is the most populated area in Fort McMurray and consists largely of high density housing. Almost 50% of the residents of Lower Town live in apartment buildings. Therefore, special consideration should be given to the leisure needs of high density dwellers when determining levels of provision in this neighbourhood.

5.6.2.2 Waterways. Waterways is the smallest neighbourhood in Fort McMurray. A significant portion of the residents live in single family units; however, the majority live in higher density areas in mobile homes.

The relatively high proportion of very young children in Waterways indicates the need for tot lots, especially among the mobile home dwellers. Provision of a variety of recreation facilities and active open space would be conducive to the needs of the high percentage of adults aged 20 to 35 years living in Waterways. Waterways also has a higher proportion of older adults, aged 50 and older, than any of the other neighbourhoods. Passive areas of landscaped open space should also be considered.

5.6.2.3 Gregoire Park. The population of the Gregoire Park consists largely of young adults and young children. The largest proportion of children aged four years and under in Fort McMurray live in Gregoire Park. All of the residents of Gregoire Park live in mobile homes. There appears to be a considerable amount of open space in Gregoire Park. Consideration should be given to converting this open space into areas conducive to active and passive recreation.

5.6.2.4 Beacon Hill. Beacon Hill data indicate that 87.7% of the residents have at least high school, and 42% have post-secondary education. The majority of Beacon Hill residents live in single family units. Of the six neighbourhoods in Fort McMurray, Beacon Hill appears to be the most affluent. As indicated in Section 4.1.2 this factor affects the types of recreation opportunities demanded by the residents.

5.6.2.5 Thickwood Heights. The ages of the population of Thickwood Heights are fairly evenly distributed. A large number of children correlates with a large number of young adults. Although the majority of Thickwood Heights residents live in single family units, a sizeable proportion of the population resides in high density apartments and townhouses.

Thickwood Heights is spatially the largest neighbourhood containing the second largest number of people in Fort McMurray. It is important that recreation facilities and open space areas be distributed evenly throughout Thickwood in order that all residents have equal access to them.

5.6.2.6 Abasand Heights. The vast majority of Abasand Heights residents are under 40 years of age, most of whom live in high density apartment buildings or townhouse complexes. Most of the children in Abasand Heights are nine years old or younger. Tot lots and playgrounds should be provided, especially in the high density areas. These areas are necessary to provide children without backyards the opportunity to play in a safe environment and to experience the open space they lack in high density housing areas.

Active open space and recreation opportunities of all types would be well used in this young neighbourhood. In addition, passive open space is most important in the high density housing areas as landscaped spaces can enhance the high density residential environment.

5.6.3 Standards for Neighbourhood Open Space

Three types of open space are required for each neighbourhood: tot lots, neighbourhood parks, and playfields. Each of these types has been defined below:

1. A tot lot consists of 0.2 to 0.4 ha of open space with a service radius of 0.2 to 0.4 km. Tot lots usually include sand and grassy areas equipped with playground equipment for pre-schoolers. Benches should also be provided for parents wishing to supervise the play of their young children.
2. A neighbourhood park comprises 1.2 to 2.8 ha of open space. The service radius for neighbourhood parks varies from 0.4 to 0.8 km. Neighbourhood parks include amenities which serve all age groups. The following activities may take place in a neighbourhood park: passive pursuits such as walking or meeting with friends; active pursuits such as tennis, ice skating, or fitness activities. Neighbourhood parks may include a paved multi-use area, a landscaped passive area, an area furnished with playground equipment, and/or an open play area to accommodate a wide range of leisure activities.
3. A playfield consists of 2.0 to 3.2 ha of open space. The service radius ranges from 0.8 to 2.4 km. Playfields usually are found adjacent to school yards where they may be used for both school and community athletics. A playfield may include a track, a baseball diamond, and a soccer or football field.

Neighbourhood open space standards will be developed by:

a. Assessing the demographic and social characteristics of each neighbourhood (i.e., age structure, type of housing [high density versus low density] and size of neighbourhood);

b. Estimating the park space requirements for each neighbourhood based on the Canadian Parks and Recreation (CPRA) service radius standards which will be modified according to the characteristics of each neighbourhood; and

c. Converting the total neighbourhood open space required to a standard for land to a unit of population.

Where neighbourhoods have similar characteristics, one can expect the servicing standards to be similar. For example, the Lower Townsite, Thickwood Heights and Beacon Hill all consist of a mixed age distribution among residents living in generally low density, single family housing. The service radius standards for these neighbourhoods are thus higher than those for Waterways, Gregoire Park, and Abasand Heights where there are greater numbers of young children and higher percentages of high density housing.

The open space standards are presented in Table 24. The figures reflect the social and demographic differences between the neighbourhoods. For example, given a service radius standard of 0.2 km, Waterways should have three tot lots. Waterways is the smallest community in Fort McMurray in both size and population. Although there are a considerable number of very young children in Waterways, recommending three tot lots for this neighbourhood would mean that each tot lot would serve only 250 people. Of these 250 people, the percentage of very young children would not be significant enough to warrant the provision of a tot lot. The number of tot lots for Waterways thus has been reduced to two, or one tot lot per 375 people.

Four tot lots have been recommended for Gregoire Park. The same number of tot lots were recommended also for the Lower Townsite and for Thickwood Heights, neighbourhoods which are considerably larger in size and population than Gregoire Park. The service radius standard for tot lots in Gregoire Park is half of the service radius for the Lower Townsite and Thickwood Heights. The difference between these standards is due to Gregoire Park

having a higher number of very young children, and that 100% of the residents live in mobile homes (high density housing). Hence, the need for open space areas, particularly for tot lots, would be greater in Gregoire Park. Therefore, four tot lots are required in Gregoire Park where there are a number of small undeveloped open space areas which are ideal sites for tot lots.

The service radius standard for neighbourhood parks in Gregoire Park is 0.4 km. This means that there should be one or two neighbourhood parks in Gregoire Park. Gregoire Park is a smaller neighbourhood, and as previously mentioned, it contains a number of undeveloped open space sites which could become tot lots or pocket parks. Therefore, only one neighbourhood park in Gregoire Park is recommended.

Three tot lots, one neighbourhood park, and one playfield have been recommended for Abasand Heights. The provision of three tot lots is based on a service radius of 0.2 km, which is justified by the considerable number of very young children in Abasand Heights. One neighbourhood park and one playfield are ample for this neighbourhood.

Both the Lower Townsite and Thickwood Heights require four tot lots, two neighbourhood parks, and two playfields. More open space areas are necessary in the Lower Townsite and in Thickwood Heights than in the other neighbourhoods in order to satisfy the increased demand generated by the larger populations and the sizes of these two neighbourhoods.

Beacon Hill has been allotted one of each type of open space area. Based on a service radius standard of 0.4 km, only one tot lot has been recommended for Beacon Hill. This figure may at first appear inadequate for a nieghbourhood of this size, however the proportion of very young children is not significantly high and the majority of Beacon Hill residents live in single family dwellings, most of which likely have private yards in which tots can play.

5.6.4 Standards for Neighbourhood Facility Development

The Town of Fort McMurray presently operates the following facilties on a neighbourhood basis: tennis courts, ball diamonds, soccer-football fields, and ice rinks. Provision of these facilities has historically been one aspect of the leisure delivery system where supply has come close to meeting demand (see Section 4). To continue this trend and to ensure a more equitable distribution of facilities between neighbourhoods, standards in the development of neighbourhood facilities will be determined by:

1. Establishing a minimum standard based on the median level of current provision (the median is considered the most appropriate indicator of equitable supply). This is because in some neighbourhoods there presently exist extreme cases of under or oversupply of one or more facilities. These figures would have a disproportionate affect if a mean were used; and
2. Adjusting the minimum standards to each neighbourhood based on the service areas of each facility and the population of the area served (see Table 25).

Table 26 indicates the level of facility provision in each neighbourhood, the median level, and the 1979 neighbourhood facility needs. As specified in the Table 27, the following additions should be made to present supply to establish an equitable distribution of facilities.

Waterways presents a special case. Currently, it does not have any of the neighbourhood facilities. The minimum standard is not applicable because its population is small relative to the other neighbourhoods. Nevertheless, in order to maintain uniformity in distribution, one of each facility is required or improved pedestrian access to a series of facilities located adjacent to Waterways, in the Lower Townsite, should be considered.

1. Ice Rinks. With the exception of Waterways, all of the neighbourhoods have ice rinks (construction of ice rinks in Beacon Hill and Abasand is presently

Table 25. Open space standards for each neighbourhood, Fort McMuray, 1979.

NEIGHBOURHOOD	TYPE OF OPEN SPACE	SERVICE RADIUS	NO. OF OPEN SPACES REQUIRED	POPULATION RATE
Lower Townsite	Tot Lot	.4 km	4	1 per 2750 pop.
	Neighbourhood Park	.8 km	2	1 per 5500 pop.
	Playfield	.8 km	2	1 per 5500 pop.
Waterways	Tot Lot	.2 km	2	1 per 375 pop.
	Neighbourhood Park	.4 km	1	1 per 750 pop.
	Playfield	.8 km	1	1 per 750 pop.
Beacon Hill	Tot Lot	.4 km	1	1 per 2700 pop.
	Neighbourhood Park	.8 km	1	1 per 2700 pop.
	Playfield	.8 km	1	1 per 2700 pop.
Gregoire Park	Tot Lot	.2 km	4	1 per 650 pop.
	Neighbourhood Park	.4 km	1	1 per 2600 pop.
	Playfield	.8 km	1	1 per 2600 pop.
Thickwood Heights	Tot Lot	.4 km	4	1 per 1750 pop.
	Neighbourhood Park	.8 km	2	1 per 3500 pop.
	Playfield	.8 km	2	1 per 3500 pop.
Abasand Heights	Tot Lot	.2 km	3	1 per 1100 pop.
	Neighbourhood Park	.4 km	1	1 per 3300 pop.
	Playfield	.8 km	1	1 per 3300 pop.

Table 26. Level of provision per unit of population, neighbourhood facilities.

Neighbourhood Facility	Lower Townsite	Beacon Hill	Gregoire Park	Abasands	Thickwoods	Waterway	Median Level of Provision
Tennis Courts	1 per 1400	1 per 800	-	-	-	-	1 per 1200
Ice Rinks	1 per 4800	1 per 2446	1 per 1200	1 per 3000	1 per 2650	-	1 per 2500
Soccer/Football Fields	1 per 1900	1 per 1200	1 per 1200	1 per 1500	1 per 1500	-	1 per 1500
Ball Diamonds	1 per 1600	1 per 1200	1 per 2500	1 per 1500	1 per 1500	-	1 per 1500

Table 27. Neighbourhood recreation facilities, Fort McMurray, 1979.

Neighbourhood	Existing Facilities				1979 Facility Needs			
	Tennis Courts	Soccer/ Football Fields	Ball Diamonds	Ice Rinks	Tennis Courts	Soccer/ Football Fields	Ball Diamonds	Ice Rinks
Lower Townsite	7	5	6	2	7	6	6	3
Waterways	-	-	-	-	1	1	1	1
Beacon Hill	3	2	2	1	3	2	2	1
Gregoire Park	-	2	1	2	2	2	2	2
Thickwood Heights	-	4	4	2	4	4	4	2
Abasands Heights	-	2	2	1	2	2	2	1

underway; both have been included under existing facilities in this analysis). The median level of provision is approximately one per 2500. To maintain this standard, one addition rink is needed in Lower Townsite and Waterways.

2. Soccer-Football Fields. The minimum standard for this facility is one per 1500. Therefore, one additional field is needed in Lower Townsite and one in Waterways.
3. Ball Diamonds. In order to bring present supply up to the minimum standard of one per 1500, a new diamond is required in both Gregoire Park and Waterways.
4. Tennis Courts. The major deficiency in neighbourhood facilities is in tennis courts. Presently, the only tennis courts are in Lower Townsite and Beacon Hill, both neighbourhoods being oversupplied. It would be a major expense to maintain the same level of provision in all of the neighbourhoods.

A more appropriate level of provision is one court per 2000. A factor influencing this standard is the possibility of developing tennis courts as multi-use areas. It is preferrable that the courts be constructed in groups of two or four in order that they may be converted to ice rinks in the winter. The surface of four courts will accommodate a full-size ice rink and two courts can be used as leisure skating areas. With this in mind, two courts are recommended in Gregoire Park, Waterways, and Abasand Heights as their population is expected to increase substantially in the future.

6. PROJECTED FUTURE LEISURE SERVICE REQUIREMENTS

This section projects the level of leisure servicing which will be required in the AOSERP area up to 1986. Consistent with the format presented in the previous section, leisure service requirements will be broken into community open space and facilities as well as neighbourhood open space and facilities. An additional section will include future requirements for leisure programming and the private sector. Long-range requirements for the Town of Fort McMurray will be dealt with first. This will be followed by requirements for the proposed new town and a discussion of future leisure services in unincorporated communities in the AOSERP study area. This will be preceded by a review of growth projections made for the Town of Fort McMurray by the Town Planning Department, and for the region by Young (1978).

6.1 FORT MCMURRAY GROWTH SCENARIOS

Figure 6 , showing the projected population for Fort McMurray as developed by Young (1978), indicates that, by 1985, 43 000 people will be living in Fort McMurray. However, to develop neighbourhood projections, breakdowns by community growth were required. Contact was made with Fort McMurray Planning Office which had projections by neighbourhoods for 1986. Therefore, Young's projection has been extended to 47 000 in 1986 to coincide with the neighbourhood information.

The Fort McMurray Planning Team indicated that four of the existing neighbourhoods, Lower Townsite, Waterways, Thickwood Heights, and Abasand Heights, will accommodate approximately 13 000 of the new residents (the population forecasts for each neighbourhood is found in Table 28). The population of Beacon Hill and Gregoire Park will remain constant. The remaining 7000 new residents will be housed in three new neighbourhoods, Grayling, Athabasca Terrace, and Timberlea.

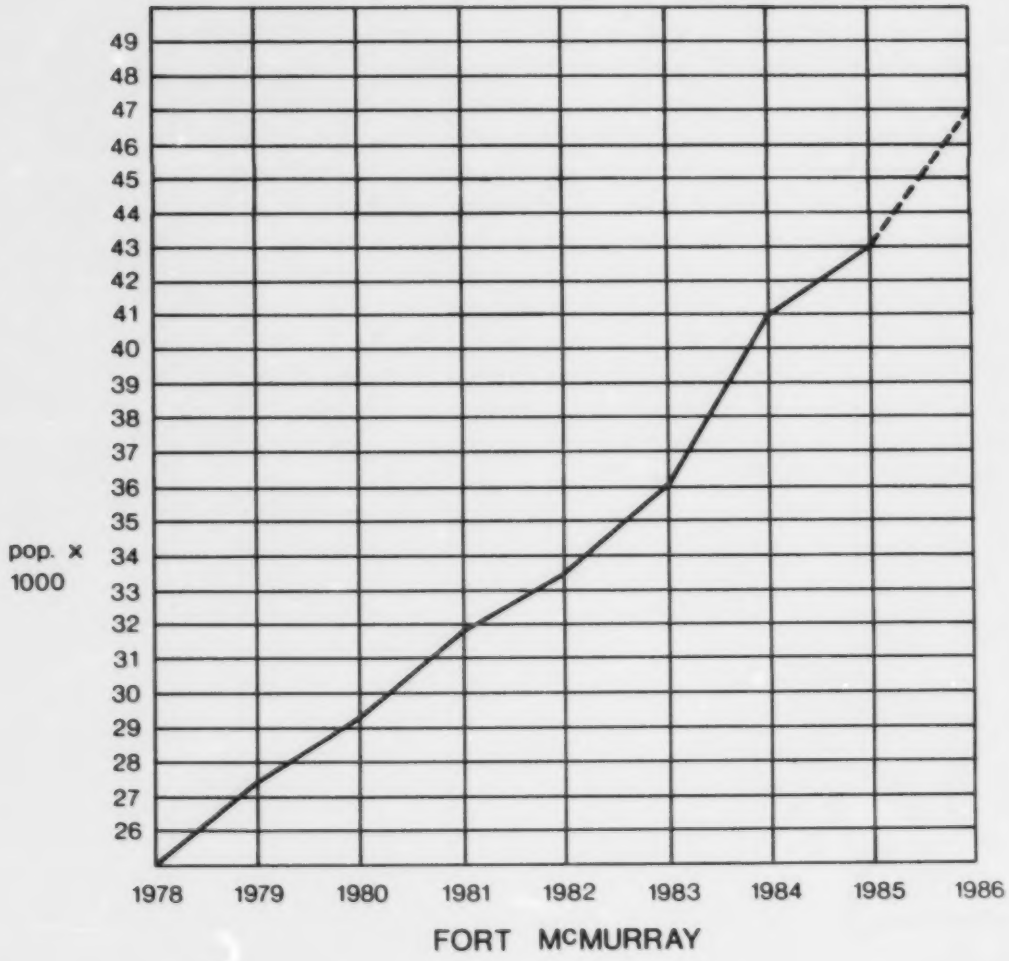

Figure 6. Population projections for Fort McMurray to 1986 (Young 1978).

Table 28. Population forecast for 1986, Fort McMurray neighbourhood distribution[a].

Neighbourhood	1979 Population	Expected 1986 Population (approx.)
Lower Townsite	11 000	13 000
Thickwood Heights	7 000	16 000
Beacon Hill	2 700	2 700
Waterways	750	1 500
Gregoire Park	2 600	2 600
Abasand Heights	3 300	3 500
Grayling		500
Athabasca Terrace		2 000
Timberlea		5 000
Total	27 350	46 800

[a] Personal contact with the Fort McMurray Planning Team.

6.1.1 Grayling

In the summer of 1980, construction will begin on this new neighbourhood. Grayling will be a small neighbourhood located below Abasand Heights. It will house 500 people in single family units by 1986.

6.1.2 Athabasca Terrace

This new neighbourhood will be located below Thickwood Heights. Construction is due to start in 1983; it will be completed by 1986.

The individual neighbourhoods are presented in Table 28. The Fort McMurray Planning Team indicated that four of the existing neighbourhoods will accommodate approximately 13 000 of the new residents. These are Lower Townsite, Waterways, Thickwood Heights, and Abasand Heights. The population of Athabasca Terrace will reach 2000 people by this time. There will be some townhouses constructed, but the majority of housing will be in the form of low density single family units.

6.1.3 Timberlea

Located adjacent to Thickwood Heights, Timberlea will be the largest of the new neighbourhoods proposed for Fort McMurray. Construction is scheduled to start by 1983. The 1986 population of Timberlea is estimated at 5000. It will consist of mixed housing with a majority of single family units similar to Thickwood Heights.

6.2 REGIONAL GROWTH SCENARIOS

Given the developments which have occurred during the months preceding this study, the two-town scenario developed by Young (1978) has been accepted as the basis for developing projections of leisure service requirements. The two-town scenario indicates that a second town will be developed 95 km north of Fort McMurray on the east bank of the Athabasca River escarpment. The town will be located with 40.5 km of the proposed Alsands site.

As Figure 7 indicates, Young (1978) predicts that the new town, Fort Hills, will reach a population between 12 500 and 15 000 by 1985. To encourage stability within the new community, the settlement of families should be encouraged. If such a program was successful, the population initially should exhibit many of the characteristics prevalent in Fort McMurray in 1979, rather than characteristics similar to those exhibited during initial growth phases (i.e., predominantly young singles). Therefore, the 1979 Fort McMurray standards developed in Section 5 could be applied to Fort Hills.

6.3 PROJECTED NEIGHBOURHOOD OPEN SPACE REQUIREMENTS

An increase in the population of Fort McMurray will impose greater demands on the 1979 open space system[1]. The following section will first outline some of the changes to be made to the open space systems of the existing neighbourhoods that are expected to absorb more people. A discussion of open space standards for the new neighbourhoods will follow.

Assuming that the age distribution of the 1986 population of Fort McMurray will resemble closely that of the current population, and that the proportions of low and high density housing in each of the existing neighbourhoods will remain relatively constant, the 1979 open space standards, which were tailored to the specific characteristics of each neighbourhood, generally may be used as base standards for 1986. The number of open space areas required by 1986 can be determined simply by dividing the 1979 neighbourhood population ratios for each type of open space into the expected populations of each neighbourhood in 1986. Table 29 presents the results of these calculations. Beacon Hill and Gregoire Park have not been included in the table because their population figures are not expected to change by 1986.

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[1] *The 1979 open space system refers to the service radius standards and population ratios required for each type of neighbourhood open space in 1979 (see Section 5.8.4).*

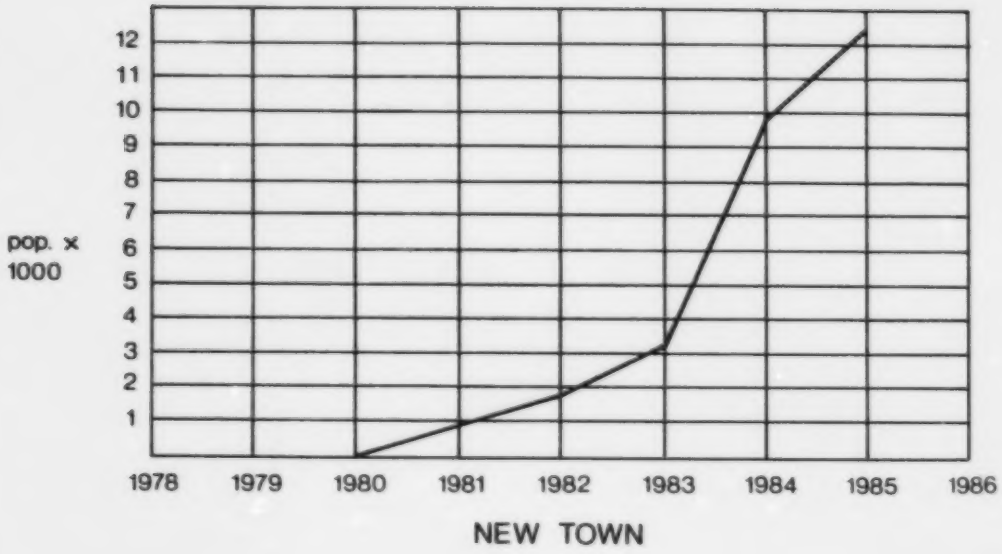

Figure 7. Population projections for the New Town to 1986 (Young 1978).

Table 29. Open space requirements for each neighbourhood in 1986, Fort McMurray.

Neighbourhood	Type of Open Space	#Open Spaces Required 1979	Population Ratio	Educated Population 1986	# Open Space Required for 1986
Lower Townsite	Tot Lot	4	1 per 2750pop.	13000	4
	Neighbourhood Park	2	1 per 5500pop.		2
	Playfield	2	1 per 5500pop.		2
Waterways	Tot Lot	2	1 per 375pop.	1500	3
	Neighbourhood Park	1	1 per 750pop.		1
	Playfield	1	1 per 750pop.		1
Thickwood Heights	Tot Lot	4	1 per 1750pop.	16000	8
	Neighbourhood Park	2	1 per 3500pop.		4
	Playfield	2	1 per 3500pop.		4
Abasand Heights	Tot Lot	3	1 per 1100pop.	3500	3
	Neighbourhood Park	1	1 per 3300pop.		1
	Playfield	1	1 per 3300pop.		1
Grayling	Tot Lot			500	1
	Neighbourhood Park				1
	Playfield				1
Athabasca Terrace	Tot Lot		1 per 2700	2000	1
	Neighbourhood Park		1 per 2700		1
	Playfield		1 per 2700		1
Timberlea	Tot Lot		1 per 1750	5000	3
	Neighbourhood Park		1 per 3500		1
	Playfield		1 per 3500		1

6.3.1 Existing Neighbourhoods

The number of tot lots, neighbourhood parks, and playfields in the Lower Townsite and in Abasand Heights will not change from 1979 to 1986. Each of these neighbourhoods will absorb only 2000 new people by 1986. The increase in the population of either neighbourhood is not significant enough to alter the number of neighbourhood open space areas required according to the 1979 standards.

It has been proposed that some of the riverbank areas in the Lower Townsite be developed into passive community open space areas, and that trails for walking, fitness, or cross-country skiing be cut through the woodlands surrounding Abasand Heights. If these proposals are initiated, they will increase the amount of open space accessible to the residents in the Lower Townsite and in Abasand Heights, satisfying an increase in the demand for open space caused by larger populations.

The 1979 population ratio standards for open space in Waterways are already very low compared to the other neighbourhoods. Given this and the fact that the size of Waterways (spatially) will not increase, a doubling of the number of neighbourhood open space areas, corresponding to a doubling of the 1979 population of Waterways by 1986, would not cause an overloading of the 1979 open space system. The number of tot lots, however, may have to be increased by one if a considerable number of the new residents are children four years of age or younger. The number of neighbourhood parks and playfields should remain constant until 1986.

The population of Thickwood Heights will more than double by 1986. The size of the neighbourhood will also increase to absorb the new residents. The 1979 population ratios would be valid guidelines to use in determining how many tot lots, neighbourhood parks, and playfields should be provided to satisfy leisure demands in the expanded Thickwood Heights. A doubling of the number of tot lots, neighbourhood parks, and playfields in Thickwood Heights will be required in 1986 (see Table 30). Trails developed through

Table 30. Neighbourhood leisure facility requirements for each neighbourhood in 1986, Fort McMurray.

Neighbourhood	Neighbourhood Recreation Facility	Population Ratio Standards	1979 Neighbourhood Population	# Facilities Required 1979	Expected 1986 Population	#Facilities Required 1986
Lower Townsite	Ice Rinks	1 per 2500	11000	4	13000	4
	Soccer Fields	1 per 1500		7		7
	Ball Diamonds	1 per 1500		7		7
	Tennis Courts	1 per 2000		6		6
Waterways	Ice Rinks	1 per 2500	750	1	1500	1
	Soccer Fields	1 per 1500		1		1
	Ball Diamonds	1 per 1500		1		1
	Tennis Courts	1 per 2000		2		2
Beacon Hill	Ice Rinks	1 per 2500	27000	1	27000	1
	Soccer Fields	1 per 1500		2		2
	Ball Diamonds	1 per 1500		2		2
	Tennis Courts	1 per 2000		2		2
Gregoire Park	Ice Rinks	1 per 2500	2600	1	2600	1
	Soccer Rinks	1 per 1500		2		2
	Ball Diamonds	1 per 1500		2		2
	Tennis Courts	1 per 2000		2		2
Thickwood Heights	Ice Rinks	1 per 2500	7000	3	16000	5
	Soccer Fields	1 per 1500		4		10
	Ball Diamonds	1 per 1500		4		10
	Tennis Courts	1 per 2000		4		8

continued . . .

Table 30. Concluded.

Neighbourhood	Neighbourhood Recreation Facility	Population Ratio Standards	1979 Neighbourhood Population	#Facilities Required 1979	Expected 1986 Population	#Facilities Required 1986
Abasand Heights	Ice Rinks	1 per 2500	3300	1	3500	1
	Soccer Fields	1 per 1500		2		2
	Ball Diamonds	1 per 1500		2		2
	Tennis Courts	1 per 2000		2		2
Grayling	Ice Rinks	1 per 2500			500	1
	Soccer Fields	1 per 1500				1
	Ball Diamonds	1 per 1500				1
	Tennis Courts	1 per 2000				2
Athabasca Terrace	Ice Rinks	1 per 2500			2000	1
	Soccer Fields	1 per 1500				1
	Ball Diamonds	1 per 1500				1
	Tennis Courts	1 per 2000				2
Timberlea	Ice Rinks	1 per 2500			5000	2
	Soccer Fields	1 per 1500				3
	Ball Diamonds	1 per 1500				3
	Tennis Courts	1 per 2000				4

the woodlands surrounding Thickwood Heights would further alleviate the demand for neighbourhood open space imposed by an increased population.

6.3.2 New Neighbourhoods

Open space standards for the three new neighbourhoods proposed for Fort McMurray must reflect the precepts used to establish the 1979 open space service radius standards for the existing neighbourhoods. They are as follows:

1. The neighbourhoods in Fort McMurray are separated from each other by either physical or man-made barriers which limit mobility between neighbourhoods. Therefore, each neighbourhood must have its own core supply of tot lots, neighbourhood parks, and playfields.
2. The supply of neighbourhood open space areas will be based on a set of service radius standards. The service radius standards are modified by the age distributions and the housing composition in each neighbourhood. From these service radius standards, the number of tot lots, neighbourhood parks, and playfields required are determined based on the size (spatially) of each neighbourhood.
3. Population ratio standards are then determined by dividing the number of neighbourhood open space areas requred into the population of each neighbourhood (see Table 29).

The population and housing characteristics of the new neighbourhoods will be compared to existing neighbourhoods to determine if similarities exist. If there are similarities, the 1979 population ratio standards for open space will be used to estimate the amount of open space required in the new neighbourhoods.

Grayling will consist of approximately 500 residents living in single family units. Grayling does not correspond closely

to any of the existing neighbourhoods due to its small size and single type of housing.

Based on the precept that each neighbourhood be supplied with one of each type of neighbourhood open space, Grayling therefore will require one tot lot, one neighbourhood park, and one playfield. The 1977 Alberta Planning Act requires that developers of new neighbourhoods set aside 10% of the land being developed as recreation reserve. If a school is constructed in Grayling, the 10% recreation reserve land will probably take the form of a school playfield. Any space left over after the playfield has been constructed should be used for the tot lot. Additional open space would have to be acquired for the neighbourhood park. If a school is not planned, due to the small size of Grayling, the 10% recreation reserve land should be used for the tot lot and the neighbourhood park. The residents of Grayling would then have to use the playfield facilities in nearby Abasand Heights since it is not feasible to construct a playfield exclusive from a school.

The population size and housing characteristics of Athabasca Terrace are comparable to those of Beacon Hill. The population of Athabasca Terrace will be approximately 2000 while Beacon Hills population is and will remain at 27 000 until 1986. Both neighbourhoods consist of predominantly single family type housing.

Based on these similarities, the 1979 open space population ratio standards for Beacon Hill will be applied to Athabasca Terrace. One tot lot, one neighbourhood park, and one playfield will be required in Athabasca Terrace (see Table 30). It is important that these figures be regarded as estimates, subject to modifications based on the actual characteristics of Athabasca Terrace and its residents when construction is completed.

The characteristics of Timberlea are comparable to those of Thickwood Heights. Timberlea will be the largest of the new neighbourhoods, containing approximately 5000 people by 1986. Like Thickwood Heights, the housing composition of Timberlea will be

mixed, with the majority of residents occupying single family units. Again, because of these similarities, the 1979 population ratio standards for Thickwood Heights will be used to plan the 1986 open space system for Timberlea. The 1979 population ratios have been divided into the 1986 population of Timberlea to determine how many open space areas should be supplied in Timberlea. Three tot lots, one neighbourhood park, and one playfield will be required in Timberlea in 1986 (see Table 30). Once again, these figures are subject to changes based on the actual characteristics of Timberlea once construction is completed.

6.4 PROJECTED NEIGHBOURHOOD RECREATION FACILITY REQUIREMENTS

Based on the following assumptions, the 1979 standards for neighbourhood facilities will be used to determine the provision of facilities for the existing neighbourhoods in 1986:[1]

1. That the 1979 standards were developed in keeping with the user preference data and the 1979 demographic characteristics of Fort McMurray;
2. That the user preference data and the demographic characteristics will change between 1979 and 1986; however, this change will not be significant enough to warrant new standards;
3. That, since mobility between neighbourhoods is limited, in order to ensure an equitable distribution of neighbourhood facilities, each neighbourhood requires at least a core set of facilities (i.e., one ice rink, one soccer field, one ball diamond, and one set of two tennis courts); and

---

[1] *The 1979 standards for neighbourhood facilities refers to the population ratio standards calculated for each type of recreational facility in each of the existing neighbourhoods in Fort McMurray in 1979 (see Section 5.5.4).*

4. That in some cases the number of facilities to be provided in 1986 will not correspond exactly to the population ratio standards. The figures will be rationalized based on the characteristics of each neighbourhood (see Table 30).

6.4.1 Existing Neighbourhoods

The population of Waterways is expected to double, reaching 1500 by 1986. The size of Waterways (spatially) will not change, but with the residential infilling the population density will increase. The increase in population density should not have a profound effect on the provision of neighbourhood recreation facilities in Waterways. The 1979 population ratio standards developed in Section 5 for Waterways were very low due to the small population. Although the population of Waterways is expected to double by 1986, the population ratio standards still will remain quite low compared to the other neighbourhoods. Therefore, the 1979 supply of neighbourhood facilities in Waterways will not have to be increased to satisfy the demand generated by the increased population in 1986.

As was the case with neighbourhood open space areas, the number of neighbourhood recreation facilities should remain constant in both the Lower Townsite and Abasand Heights until 1986. The populations of these neighbourhoods are not expected to increase by more than 2000 people. The 1986 population increases will not increase markedly the demand for neighbourhood facilities, hence the 1979 supply of facilities may remain constant in the Lower Townsite and in Abasand Heights (see Table 31).

The population of Thickwood Heights is expected to more than double by 1986. Corresponding to this will be an increase in the size of the neighbourhood. Therefore, a doubling of the 1979 supply of facilities will be required.

Table 31. Community recreation facilities for Fort McMurray, 1986.

Type of Facility	1979 Population Ratio Standards	1986 Population of Fort McMurray	Number of Facilities Required in 1986
Arena (seats 500)	1 per 9000 population		5
Arena (seats 2000 to 3000)	1 per 30 000 population	47 000	1
Cultural Facility	Standards not applicable		
Curling Rinks	1 sheet ice per 1800 pop.		26
Golf Course (18 holes)	1 per 30 000 population		1
Library	1 per community		1
Major Athletic Park	1 per 20 000 population		1
Marina	1 per community		1
Museum-Nature Centre	1 per community	47 000	1
Senior Citizen's Drop-in Centre	1 per community		1
Swimming Pool	1 per 30 000 (bathing capacity 300)		2

6.4.2 New Neighbourhoods

Section 6.3.2 indicated that the three new neighbourhoods of Grayling, Athabasca Terrace, and Timberlea should have demographic characteristics similar to the existing neighbourhoods. The 1979 neighbourhood facilities population ratio standards will be applied to the new neighbourhoods wherever possible in order to estimate the 1986 supply of facilities for these new neighbourhoods.

Grayling, as is the case with Waterways, will be a very small neighbourhood with a 1986 population of 500. Based on the precept that each neighbourhood be supplied with a core set of facilities, Grayling should have one ice rink, one soccer field, one ball diamond, and one set of two tennis courts. If a school is constructed in Grayling, its playfield facilities will be the site of the soccer field and ball diamond. If no school is planned for this small neighbourhood, the residents of Grayling may have to use the soccer and baseball facilities in nearby Abasand Heights. A set of two tennis courts likely would be well used even in a neighbourhood the size of Grayling, and could double as an ice rink in the winter.

The demographic characteristics of Athabasca Terrace and Timberlea correspond to those of Beacon Hill and Thickwood Heights, respectively. The 1979 population ratio standards for neighbourhood facilities therefore will be applied to Athabasca Terrace and Timberlea.

Having divided the 1986 population of Athabasca Terrace and Timberlea by the 1979 population ratio standards for each type of neighbourhood facility, Athabasca Terrace will require one ice rink, one soccer field, one ball diamond, and one set of two tennis courts (i.e., a core set of neighbourhood recreation facilities). The population of Timberlea will be the largest of the new neighbourhoods, an estimated 5000 by 1986. Two ice rinks, three soccer fields, three ball diamonds, and four tennis courts will be required to provide Timberlea with an equitable supply of neighbourhood facilities (see Table 30).

6.5 PROJECTED COMMUNITY RECREATION FACILITIES

By applying the 1979 population ratio standards to the expected 1986 population of Fort McMurray, the number of community facilities required in 1986 may be determined. These are presented in Table 31.

The term "standard not applicable" has been applied to cultural community facilities because facilities such as arts and crafts rooms or music rooms may be accommodated in arenas, schools, or libraries. In this case it should not be necessary to construct a cultural facility exclusive from other facilities.

6.6 PROJECTED COMMUNITY OPEN SPACE

As noted in Section 5.5, the provision of a community park oriented towards passive pursuits would provide the town with a balanced community park system. Once the system is completed, it will be adequate to meet the needs in 1986.

6.7 PROGRAMMING

Deficiencies in the present program offerings were discussed in Section 4.3. The purpose here is to identify the role the Parks and Recreation Department should play in the future provision of leisure opportunities for the Town of Fort McMurray. Programming in the New Town also will be discussed with respect to its function in the first stages of leisure resource development.

In recent years, the focus of the Fort McMurray Parks and Recreation Department has been changing. Rather than expanding its role as a direct programming agent, the Department acts as catalyst and facilitator for the delivery of recreation programs. It has placed more emphasis on community involvement in the provision of recreation services and has limited its role to providing recreation opportunities when an identified need has not been met.

In keeping with this programming philosophy, other organizations and agencies in the community will be encouraged

to take more initiative in providing leisure opportunities. Similar to Edmonton and other metropolitan centres, the Parks and Recreation Department should concentrate on: advisory and consultative service, publicity, planning and research, leadership development, and developing new programs.

1. Advisory and Consultative Services. In order to provide an effective link between the public and the Department, advisory services to local groups should be increased to help them establish programs, and to obtain leadership facility and equipment requirements;
2. Publicity. The Department should both assist community groups and other agencies in their publicity requirements, and inform the community of available leisure opportunities;
3. Planning and Research. The supply-demand relationship should be measured through an evaluation process which is continuous and is integrated into the leisure programs. Tillman (1973) indicates that the evaluation process should:
   a. Guide analysis of activities in light of overall recreation and cultural program objectives; and
   b. Be employed during the program planning stage, throughout the program activities, and most importantly, following completion of the program;
4. Leadership Development. One of the most important services the Department should provide is leadership development. By establishing leadership training opportunities like workshops, seminars, and clinics, a "talent bank" of leaders in a wide range of leisure pursuits can be maintained; and
5. New Programs. The Department's role in direct programming, thus continually ensuring that the community is exposed to new programming ideas.

In the initial stages of leisure delivery system development in the New Town, programming of leisure opportunities should be a function of the Parks and Recreation Administration. Programs at the beginner level of skill development should be emphasized, therefore establishing a base from which further interest and participation can develop. At this time, the New Town should draw on the established resources of Fort McMurray (i.e., leaders, equipment, etc) to assist in program development. As the community matures and community groups and other organizations become more self-sufficient, they can be encouraged to take responsibility for programming. At this time the New Town's Parks and Recreation Administration can assume a role similar to that of the Fort McMurray Department.

6.8 PRIVATE SECTOR INVOLVEMENT IN LEISURE DEVELOPMENT

This section deals solely with the private profit sector of the recreation delivery system. The roles of community organizations and volunteer groups (private non-profit) were dealt with in the preceding section.

To reiterate statements made earlier in the report, the private sector's involvement in the delivery of leisure opportunities should be of vital interest to the public recreation agencies. There are a number of specific opportunities which the public demands, and those demands are substantial enough that individuals will pay to obtain the service. However, in many instances, the service requires that a large amount of capital is required to develop the opportunity. When situations like this arise, administrators should be encouraging private investment to meet these demands for five reasons:

1. The willingness to pay indicates there is the possibility that a profit can be realized;
2. The capital cost of the project is borne by the entrepreneur and not the taxpayers of the community;

3. Funds crucial to the supply of non-profit leisure opportunities are not tied into capital projects;
4. There is no need for the public agency to add to their fixed overhead for staffing and maintenance costs; and
5. Involvement of the private sector can result in a greater range of leisure opportunities being available to the citizens of the community.

The leisure agencies should not be a passive observer of private leisure development. The agencies should identify which sectors are best left to private development. This can be followed by presenting known investors with development prospectii to encourage their participation in the growth of the leisure delivery system.

In the New Town situation similar to the Fort McMurray experience, one must be cognizant that private capital for development will not be forthcoming until the community exhibits signs of stability. However, the lag time between the initiation of community development and private (profit) sector involvement can be shortened by energetic promotion.

6.9 LEISURE FACILITIES AND OPEN SPACE REQUIREMENTS FOR THE NEW TOWN

The New Town requirements for leisure services should be determined by expressed demands from those persons who ultimately will use the facilities and programs. Since this method is not possible in the early stages of community development, yet the importance of the availability of leisure opportunities at the outset is recognized, a basic complement of services should be provided in conjunction with other service development.

The following is the rationale and subsequent supply level for the New Town in 1986 (population 15 000). Although the specific housing and demographic characteristics of the New Town are not yet known, certain assumptions may be made. It is assumed that the age profile of the New Town will resemble that of Fort

McMurray, a generally youthful population. Considering the size of the New Town, the housing composition probably will be mixed.

The most comparable existing neighbourhood is Thickwood Heights, the largest of the existing neighbourhoods with an age distribution representative of Fort McMurray as a whole, and with a mixed housing composition. The 1979 population ratio standards of Thickwood Heights, for neighbourhood level open space and facilities, therefore will be used to determine an equitable supply for the New Town in 1986. The supply of community level open space and facilities will be determined by applying the 1979 community standards for Fort McMurray to the New Town (see Table 32). These figures are subject to modification based on the actual demographic and housing characteristics of the New Town at completion.

Table 33 indicates the supply of recreation facilities required in the New Town by 1986 employing the assumptions noted above. While the table is relatively self-explanatory, some clarification is required:

1. The arena noted in the table is intended to have seating in the 500 capacity range. Larger seating capacity arenas could be developed when expansion is required;
2. Space for cultural facilities should be accommodated within recreation facility developments and through a joint-use agreement with the local School Board;
3. The library noted in the table refers only to a branch facility which in turn would be serviced by the main branch in Fort McMurray;
4. The major athletic park should include lighted baseball-fastball diamonds, and soccer-football fields;
5. The community park should incorporate space for passive and active leisure opportunities; and
6. The supply requirements noted for leisure opportunities were developed without taking into consideration the actual physical layout of the neighbourhoods.

Table 32. Recreation facilities and open space for the New Town in 1986.

Type of Facility or Open Space Area	1979 Population Ratio Standards	1986 Population of The New Town	Number of Facilities or Open Space Areas Required in 1986
Community Facilities			
Arena	1 per 9000 population		1
Cultural Facility	Standards not applicable	15 000	
Curling Rink	1 sheet of ice per 1800 population		8
Golf Course (nine holes)	1 per 15 000 population		1
Library	1 per community		1
Major Athletic Park	1 per 20 000		1
Marina	1 per community		1
Museum-Nature Centre	1 per community		1
Swimming Pool	1 per 20 000 population (bathing capacity 200)		1
Community Open Space			
Community Park	1 per community		1
Neighbourhood Facilities			
Ball Diamond	1 per 1500 population		10
Ice Rink	1 per 2500 population	15 000	6
Soccer Field	1 per 1500 population		10
Tennis Courts	1 per 2000 population		8
Neighbourhood Open Space			
Neighbourhood Park	1 per 3500 population		4
Playfield	1 per 3500 population		4
Tot Lot	1 per 1750 population		8

> Therefore, modification may be required to accommodate geographic conditions, similar to the Fort McMurray situation.

As was referred to earlier in this section, there is the need for planners to anticipate demands for basic leisure services. Therefore, detailing requirements for 1986 is insufficient; one must also be aware of requirements for when people initially begin moving into the community.

In a similar situation of New Town development at Tumbler Ridge, British Columbia, the following facilities were recommended for an initial population of 3000 residents: a community hall, recreation complex, and two tennis courts. "The recreation complex would include a skating arena, curling rink, and an indoor swimming pool. The space for these facilities would total 8825 m^2 (95 920 square feet). Approximately 24 to 28 ha (60 to 70 acres) of open space would also be required, and should include playing fields, parks, playgrounds, baseball diamonds, and pedestrian pathways" (Thompson et al. 1978).

Cultural services included a library and although other services are required, planning for such services in advance of community input would be redundant. As long as space for such programs exists, the development of specific activities should be left to an expressed demand from residents.

It is necessary to establish the basic complement of leisure services as soon as possible as Fort McMurray exemplified what pressures unprecedented and unpredicted population growth places on recreation and cultural services. Population predictions for the New Town also may be quickly exceeded, thereby disrupting leisure service planning. If a solid base is established initially, then rapid population growth will not overwhelm the leisure system.

6.10 FUTURE LEISURE SERVICES IN UNINCORPORATED COMMUNITIES IN THE AOSERP STUDY AREA

The evaluation of future leisure service needs of the existing four communities in the AOSERP study area, excluding Fort McMurray, is hindered by the fact that three of the communities are traditional settlements predating oil sands development and have evolved their own leisure system to meet their specific requirements. The fourth community is to be a planned New Town with no history of leisure service development other than that which exists in similarly planned new towns.

The differences between the two groups will be extremely pronounced in terms of population, socio-economic status, and expectations of leisure in Northern Alberta. Therefore, the tranditional communities, Fort Chipewyan, Fort MacKay, and Anzac, and the proposed New Town will be analyzed separately.

Despite these differences, the future leisure requirements of all the communities stem from a similar set of factors. These include:

1. The current level of leisure service development;
2. The anticipated population growth occurring within the communities;
3. The integration of local leisure facilities and services with the greater regional development;
4. The possible change in socio-economic conditions within the communities; and
5. The development and application of recreational standards, on the basis of demographic characteristics and spatial requirements within the communities.

Some of the above noted points were dealt with in Section 4.

6.10.1 Effects of Oil Sands Development

The socio-economic changes which accompany oil sands development may influence the types of leisure services demanded by local populations. Within the three unincorporated communities,

increases in the availability of work, wage labour, and real income may in fact alter the traditional demands for leisure activities.

These socio-economic changes may:

1. Increase the amount of time available for leisure activities;
2. Increase the expectations and demand for leisure services; and
3. Help change the structure of leisure service provision from informal participation to a more organized form (i.e., league competition, user fees).

Each of these results will increase the pressure upon the present level of services and require a modification of leisure services.

For example, Fort MacKay may wish to interact on a recreational or cultural basis with the proposed New Town development. In order to participate on an equal and reciprocal basis, facilities within the community may have to be upgraded. Perhaps the need for a covered ice surface may arise or a larger assembly hall may be required. These new demands that occur as a result of socio-economic conditions will have to be identified and integrated in future leisure service implementation.

6.10.2 Application of Facility Standards

The application of an established set of standards to the leisure services of these unincorporated communities may appear unnecessary as the population of these communities does not exceed minimum standard levels (most facility standards are based on population per thousand). However, this should not be the case as community residents, regardless of settlement size, have basic leisure requirements. The introduction of a standardized level of leisure services can ensure the provision of such basic needs (i.e., indoor recreation space).

If the population does not exceed 1000, as is the case of Fort MacKay and Anzac, then the selected standards system should be modified. Within the two communities, this modification will have to recognize either the development of a new town in close proximity, the influence of a rapidly increasing regional population, or both.

In Fort MacKay the provision of leisure services in the future may be supplemented by facilities and services in the New Town (i.e., swimming pool). Facilities and services which cannot be implemented in Fort MacKay due to a lack of population base may be required to serve both Fort MacKay and the New Town. This would also reduce the possibility of duplication of services (i.e., library).

Increased usage of some local services by a growing regional population may require additional services beyond the scope of local use. In some activities, the overlay of established standards would satisfy local requirements but not regional use (i.e., cross-country skiing, day-use areas). For example, in the past in Anzac there has been conflict between local and regional users concerning the day-use area on Gregoire Lake. Anticipating larger scale use by a regional population and modification of standards will aid in accommodating and satisfying both user groups.

The future of leisure services in the unincorporated communities of the AOSERP area will be dependent on several identified factors:

1. Direct population growth within the communities will have little effect on local leisure services;
2. Growth in regional population rather than local population will be responsible for increased usage of local facilities and services. Therefore, future leisure planning will have to recognize this regional component;
3. Possible changes in socio-economic conditions within the communities will lead to changes in leisure

service demands. Local Recreation and Culture Boards will have to identify any shift in demand; and

4. Planning for future leisure services must incorporate community input. Local characteristics, unique resources, and traditional activities must be identified and combined with standard leisure needs to ensure a satisfying, efficient leisure system.

7. GUIDELINES FOR MONITORING THE LEISURE DELIVERY SYSTEM

Unlike monitoring the development of housing and health services where some historical data are available, assessment of the development of the leisure service delivery system is hampered by the lack of primary data.

Information from the survey by G. Holman (1979) provided only empirical data available on preferences for Fort McMurray. Despite the problems inherent in using data intended for another purpose within the framework of this study, it was possible to use data from this survey to generally assess the 1979 status of the leisure delivery system.

This was made possible by the availability of a reasonably complete inventory against which the survey data could be compared. Much of this inventory had to be obtained through personal contact with Parks and Recreation staff as a complete inventory of open space, facilities, and programs in 1979 was not available.

Data from earlier in the study period were very sketchy. File documentation was of limited usefulness due to its incomplete nature. Individuals directly involved in leisure during the early 1970's had left and so the analysis of motives behind leisure development was inhibited. Therefore, inferences had to be made from demographic data for assessing leisure system response.

The emphasis in this study has been placed on urban-oriented leisure opportunities. It was not that wildland opportunities were any less important, rather it was an attempt to avoid duplication of work to be done in a proposed wildlands study. This is rather unfortunate in light of wildlands activities being so highly preferred and participated in by Fort McMurray residents. Moreover, at the time of writing, the wildland study was held in abeyance. Therefore, further definition of outdoor recreation opportunities available to residents of the AOSERP study area should be forthcoming.

To guide the delivery of recreation and leisure services in the future, the responsible administrators should be aware of

the changing demands and preferences of their clientel. A survey of a representative sample conducted on a regular basis would put administrators in the position of adjusting their program offering and longer range facility development priorities. Such a survey could be employed as a marketing tool. Markets for special programs could then be identified more easily and decisions made on whether public or private involvement is required. Furthermore, the survey can also act as a check on the operating effectiveness of the delivery system. It would serve as a mechanism whereby feedback on system performance could be ascertained.

A demand survey of this nature should attempt to obtain information on the following:

1. Existing supply and user satisfaction with supply;
2. User participation in existing services;
3. User preference for new services;
4. User priorities in the implementation of new services and construction of new facilities;
5. Problems with the existing leisure delivery service;
6. Leisure delivery system performance with regard to efficiency and affectiveness;
7. Potential utilization of new services; and
8. Willingness to pay for different types of services.

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9. APPENDIX I

9.1 GARY HOLMAN SURVEY QUESTIONNAIRE

The following is the questionnaire used by Gary Holman in 1979 to obtain the data drawn on in Section 4 of this report.

The University of Western Ontario

Department of Geography
Social Science Centre
London, Canada
N6A 5C2

RECREATION QUESTIONNAIRE

Dear Sir or Madam:

As you may be aware, there are often problems encountered in developing towns in remote areas. These difficulties can be found in many areas and circumstances, and this study is primarily concerned with one of these problems, namely recreation. Through studies such as this, it is hoped that solutions may be found which could, in turn make life in a resource based community more satisfying.

Your household has been selected randomly to take part in this study which is being conducted as part of a graduate program in Geography at The University of Western Ontario. Respondents can be assured that the utmost care is being taken to ensure that their answers are considered confidential. Their complete anonymity is guaranteed.

The questionnaire is to be filled out only by an adult on behalf of the entire household. Please take a few minutes of your time and fill out every question. The success of this project is entirely dependent on accurate and complete answers. In a few days, I will call at your door and pick up the completed questionnaire. At that time I would be happy to discuss the study with you if you desire.

At this time I would like to thank you in advance for your cooperation.

Yours sincerely,

Gary A. Holman
Department of Geography

GAH/ps

GENERAL INFORMATION

1. Please indicate who is completing the questionnaire (Check one).

____ Male head of the household
____ Female head of the household
____ Male spouse
____ Female spouse

2. For each member of your household, including yourself, currently living at this address please indicate their sex and age by writing in the correct number in each box below. (For example, if you have a son aged 17 and two daughters aged 12 and 14 you would fill in the box in this manner).

		1-5	6-10	11-15	16-20	21-25	26-30	...
SEX	Male				1			
	Female			2				

Do not forget to include yourself.

		1-5	6-10	11-15	16-20	21-25	26-30	31-40	41-50	51-60	60+
SEX	Male										
	Female										

If you are married but your family does not live with you in Fort McMurray please check here. ____

Do you expect them to join you here? Yes ____ No ____

3. How long have you lived in Fort McMurray? (Check one)

	You	Family
Less than one year	____	____
Between one year and two years	____	____
Between two years and three years	____	____
Between three years and four years	____	____
Between four years and five years	____	____
Between five years and ten years	____	____
Between ten years and fifteen years	____	____
More than fifteen years	____	____
I have lived in Fort McMurray all my life	____	____

3. continued

If your family has joined you in Fort McMurray, please indicate how long they have lived in Fort McMurray in the second box above.

If you have not lived in Fort McMurray all your life. Please state the last two places where you lived, and the length of time you lived there. (Please list in order of occurrence).

	Place of Residence	Length of Stay
Present	Fort McMurray, Alberta	Same as above
Previous	_____	_____ years
Previous	_____	_____ years

4. How long do your plan on living in Fort McMurray? (Check one)

Less than one year	_____
Between one year and two years	_____
Between two years and three years	_____
Between three years and four years	_____
Between four years and five years	_____
More than five years	_____
I have not made any definite plans	_____

RECREATION

5. Please indicate by a check mark in the appropriate places, those recreational activities in which you participated in your previous place of residence. Indicate the frequency which you participated, and whether you were a member in a club for that activity. (Please add any activities not included)

Please indicate in the appropriate places below, those recreational activities for which you participate in Fort McMurray. Indicate the amount that you participate in the activity; whether you are a club member and indicate where you participate.

RECREATION FACILITY	LAST PLACE OF RESIDENCE					FORT McMURRAY					
	I Participated				Club Member	I Participated				Club Member	Location of Facility
	Daily	Weekly	Monthly	Occasionally		Daily	Weekly	Monthly	Occasionally		
Arts and crafts											
Social organizations											
Clubs											
Art gallery											
Nightclubs/taverns											
Dancing											
Movie theatres											
Concert halls											
Instrumental music											
Singing											
Bowling											
Pool hall/billiards											
Swimming											
Gymnasium sports											
Table Tennis											
Card Playing											
Squash											
Martial Arts											
Ice skating											
Hockey											
Curling											
Toboggaining											
Cross Country Skiing											
Snowmobiling											
Hunting											
Fishing											
Camping											
Picnicking											

RECREATION FACILITY	LAST PLACE OF RESIDENCE					FORT McMURRAY					
	I Participated				Club Member	I Participated				Club Member	Location of Facility
	Daily	Weekly	Monthly	Occasionally		Daily	Weekly	Monthly	Occationally		
Hiking											
Nature study											
Physical fitness											
Track and field											
Golf											
Tennis											
Badminton											
Baseball											
Softball											
Soccer											
Football											
Basketball											
Volleyball											
Bicycling											
Motorboating											
Waterskiing											
Canoeing											
Go cart racing											
Flying											
Driving for pleasure											
Attending sports events											
Photgraphy											
Others (please list)											
_____											
_____											
_____											
_____											
_____											

F3

6. What recreational facilities are currently available in Fort McMurray? (Please indicate with a check mark in the appropriate places those available)

____	Arts and crafts studio	____	Social organizations
____	Clubs	____	Art gallery or museum
____	Library	____	Nightclubs/taverns
____	Dancing	____	Movie theatres
____	Concert halls	____	Drama theatre
____	Bowling alleys	____	Shuffleboard
____	Pool hall	____	Roller skating rink
____	Swimming pool	____	Gymnasium
____	Table tennis	____	Squash courts
____	Martial arts club	____	Rifle range
____	Skeet shooting range	____	Hockey arena
____	Curling sheets	____	Toboggan slopes
____	Cross country ski trails	____	Down hill skiing
____	Snowmobiling	____	Hunting
____	Fishing	____	Camping sites
____	Picnic sites	____	Hiking trails
____	Nature trails	____	Horseback riding trails
____	Physical fitmess trails	____	Track and field facilities
____	Golf course	____	Tennis courts
____	Badminton courts	____	Lawn bowling greens
____	Baseball diamonds	____	Softball diamonds
____	Soccer pitch	____	Rugger field
____	Football field	____	Cricket pitch
____	Basketball courts	____	Volleyball courts
____	Bicycling trails	____	Horseshoes
____	Motorboating	____	Waterskiing
____	Sailing	____	Canoeing
____	Go cart racing	____	Flying
____	Others (please list)	____	_____
____	_____	____	_____
____	_____	____	_____

7. Please indicate three recreational activities which appeal the most to you (List only those activities which you already participate in). Please give reasons why this activity appeals to you.

Most favourite activity _____

Why do you participate in this activity? 1. _____

2. _____

3. _____

4. _____

Favourite activity _____

Why do you participate in this activity? 1. _____

2. _____

3. _____

4. _____

Favourite activity _____

Why do your participat in this activity? 1. _____

2. _____

3. _____

4. _____

8. How would you best describe your participation in the three activities above? (Please check one)

I participate very often ____

I participate as often as I can ____

I participate occasionally ____

I do not participate as often as I would like ____

I do not participate very often ____

I do not participate ____

8. continued

Please indicate to what degree the statements below apply to your participation in recreation (please check)

"I participate because... Do you...

	Strongly Agree	Agree	No Strong Feeling	Disagree	Strongly Disagree
... it doesn't tie me down"					
... it gives me something to do with my spare time"					
... there's nothing else to do"					
... my friends do it"					
... it lets me participate in something I'm quite good at"					
... it lets me meet new friends"					
... it keeps me fit"					
... its expected of me"					

"I do not participate or don't participate as much as I would like because ...

Do you ...

	Strongly Agree	Agree	No Strong Feeling	Disagree	Strongly Disagree
... I have no time to spare"					
... the facilities are always being used"					
... there aren't enough people who share my interests"					
... I would have to join a club or league"					
... none of my friends do"					
... I'm not very good at it"					

8. continued

Do you ...

	Strongly Agree	Agree	No Strong Feeling	Disagree	Strongly Disagree
... it costs too much"					
... I can't get to the facilities					

9. Fort McMurray has a number of recreational facilities and organizations. How would you rate the number of recreational facilities available? (Please check the appropriate place)

There are too many facilities ____

There are just enough facilities ____

There are not enough facilities ____

Are there any you would like to see added? Yes ____ No ____

If yes, please list: 1. _____

2. _____

3. _____

4. _____

5. _____

How would you rate the nuber of orgainzations and clubs in the Town? (Please check the appropriate place)

There are too many clubs/organizations ____

There are just enough clubs/ organizations ____

There are not enough clubs/organizations ____

Are there any you would like to see added? Yes ____ No ____

If yes, please list: 1. _____

2. _____

3. _____

If you have no children (pre-schoolers and children in school) living with you, please go ont to Question 11.

If you have children living with you, please answer the following question.

10. Do your children play in any league team sports? Yes ____ No ____

If Yes, please list them here:

	BOYS	GIRLS
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

Are there any activities that they took part in at your last place of residence that they do not take part in here? Yes ____ No ____

If Yes please list these activities and state why they do not participate now.

	BOYS		GIRLS	
	Activities	Reasons	Activities	Reasons
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

Are there any activities that they take part in now that they did not participate in at your last place of residence? Yes ____ No ____

If Yes, please list:

	BOYS		GIRLS	
	Activities	Reasons	Activities	Reasons
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____

9. continued

How would you rate the number of recreational facilities available for children? (Please check the appropriate place)

There are too many facilities ____
There are just enough facilities ____
There are not enough facilities ____

Are there any you would like to see added? Yes ____ No ____

If yes, please list: 1. _____
2. _____
3. _____
4. _____
5. _____

How would you rate the number of organizations and clubs available for children? (Please check the appropriate place)

There are too many clubs/organizations ____
There are just enough clubs/organizations ____
There are not enough clubs/organizations ____

Are there any you would like to see added? Yes ____ No ____

If yes, please list: 1. _____
2. _____
3. _____

CONCLUDING QUESTIONS (All respondents)

11. What is the occupation of the head of the household? _____

Please list those occupation that other members of the household now maintain.

1. _____
2. _____
3. _____
4. _____
5. _____

11. continued

How many cars does your household have? _____

How many licensed drivers are there? _____

12. Do you have any comments you would like to make regarding the recreation facilities in Fort McMurray? If yes feel free to write them below.

10. APPENDIX II

10.1 REQUEST FOR SUBMISSIONS

Dear Sir/Madam:

We are presently attempting to evaluate the recreational and cultural needs of Fort McMurray residents in order that we may provide sufficient leisure services in the future. This will enable us to better meet your needs and the demands of a growing population.

Your organization has been selected from among the community's active groups to express your feelings concerning both the present and future needs of your club or group. This will allow us to assess the current status of the recreational and cultural facilities and programs in Fort McMurray. This opportunity will help both Parks and Recreation and your organization in that it will help us understand your situation so that we may incorporate community needs in future planning.

If you would please answer the questions listed on page 2 and forward you response, by

Parks and Recreation,
Town of Fort McMurray,
8218 Franklin Avenue
Fort McMurray

We thank you for your co-operation and if you have any questions please contact:

Jill Hodgson
Cultural Co-ordinator
Parks and Recreation
743-1000

Sincerely yours,

Parks and Recreation Department

NAME OF ORGANIZATION OR GROUP _____

YEAR OF ORIGIN _____

ENROLLMENT (if available, data from 1972 to present would be appreciated)	1977	1978	1979
	____	____	____

FACILITIES/SPACE CURRENTLY BEING UTILIZED

_____
_____
_____

ADDITIONAL FACILITIES/SPACE NECESSARY TO MEET ANTICIPATED FUTURE NEEDS

_____
_____
_____

AVERAGE MEMBERS TIME INVOLVEMENT PER MONTH (averarge hours per member per month)

_____

EVENTS SPONSORED OR ORGANIZED BY YOUR GROUP (i.e. competitions, workshops, clinics)

_____
_____
_____

WE WOULD APPRECIATE ANY COMMENTS YOU MAY WISH TO INCLUDE

i.e. special needs, interaction with municipal administration, etc.

_____
_____
_____
_____
_____
_____

11. APPENDIX III

11.1 PERSONAL CONTACTS

RESOURCE PERSON	AFFILIATION	PHONE NUMBER	TOPIC OF DISCUSSION
	Alberta Municipal Affairs Municipal Inspection and Advisory Services Branch	427-2523	Census Information
Allt, Vince	Recreation Director Syncrude Camp	791-5453	information regarding present recreational facilities in the Syncrude Camp
Anderson, Jim	Program Supervisor New Town of Fort McMurray Parks and Recreation Department	743-1000	data regarding the extent and types of recreational programs presently offered in in Fort McMurray
Buis, Judith[a]	Further Education Council	743-8634	
Butler, Don	Chairman, Fort McMurray Recreation and Culture Board	743-0095	brief discussion of the past and present direction of recreational and cultural supply in Fort McMurray
Comfort, Darlene[a]	ChairPerson Fort McMurray Library Board	743-1810	
Corless, Jack[a]	Fort McMurray Recreation and Cultural Board	743-9475	
Cook, Bob	Manager, Peter Pond Hotel	743-3301	information regarding the supply of public bars and lounges in Fort McMurray
Curtis, Rick	Section Head Integrated Long Range Planning Section, Recreation, Parks and Wildlife	427-5724	discussion of the objectives and goals of a forthcoming study concerning provision of outdoor recreation services in northeast Alberta
Duncan, Bob	President, Fort McMurray Historical Society	743-2464	
Gartrell, John	Thames Group Research Inc.	432-5343	information concerning the questionnaire distributed by the Thames Group

RESOURCE PERSON	AFFILIATION	PHONE NUMBER	TOPIC OF DISCUSSION
Gaunce, Ron	Community and Social Services	427-2801	information regarding the role of social services agencies in Ft. McMurray
Guertin, Bob	Manager, MacDonald Island Society	791-4464	historical and statistical data regarding the development of MacDonald Island and the present supply of recreational facilities offered.
Hennessey, D.[8]	Principal Fort MacKay School		
Hodgson, Jill	Cultural Co-ordinator Parks and Recreation Town of Fort McMurray	743-1000	information regarding the number and type of cultural organizations currently active in Fort McMurray
Huberman, Irwin	Member, Recreation and Culture Board, Fort McMurray	743-6397	
Johnson, Diane	Recreation Consultant Edmonton 427-2001 Field Services Branch Ft.McMurray 743-7246 Dept. of Recreation, Parks and Wildlife		an inventory of existing regional recreational facilities and a determination of priorities for the study area.
Kenny, Bill	Librarian, Town of Fort McMurray	743-2121	information regarding the present status and future priorities of the library.
Lacey, Cliff	Planner, Parks Planning Branch Recreation, Parks & Wildlife	427-6781	an inventory of Provincial Parks responsibilities in the AOSERP study area.
Langis, Terry	Assistant Senior Planner New Town of Fort McMurray	743-1000	a discussion of recreational planning developments undertaken by the Town and projects currently in the planning process.
Law, Dan	Fort McMurray Recreation and Cultural Board	743-2006	

RESOURCE PERSON	AFFILIATION	PHONE NUMBER	TOPIC OF DISCUSSION
Liteplo, Ron	Fort McMurray Recreation Board and Cultural Board	791-4563	
Mahoney, Gary	Continuing Education Keyano College	791-2213	a discussion of the programs and facilities presently offered by Keyano College
Manchak, Barry	Planner, Systems Planning Recreation, Parks & Wildlife	427-7338	information regarding future parks planning in northeast Alberta and the current status of Gregoire Provincial Park.
Nichols, Peter	P.C. Nichols and Associates Ltd.	424-2185	exchange of information regarding resource areas and persons in Fort McMurray
	Northeast Alberta Commissioners Office	424-6888	use of library facilities for literature review and background research. Also to determine the priorities of recreational and cultural supply established by the Commissioners Office.
Parris, Eileen	Fort McMurray Recreation and Cultural Board	743-4559	
Ross, Keith	Planner, Town of Fort McMurray	743-1000	development of criteria for open space inventory of Fort McMurray
Spencer, Deirdre[a]	past cultural co-ordinator	743-1347	
Thom, Herb	Forest Recreation Specialist Alberta Forestry Service	427-5177	inventory of Alberta Forestry Service recreation facilities and future planning for northeast Alberta
Thompson, Allan	Systems Planning Officer	427-8758	information concerning the forthcoming study of recreation facilities and services in northeast Alberta

RESOURCE PERSON	AFFILIATION	PHONE NUMBER	TOPIC OF DISCUSSION
Toban, Maria[a]	Community Relations Officer Syncrude	743-2134	
Tradesco, Bill	Director, YMCA Fort McMurray	743-4950	an inventory of programs and facilities used by the Y in Fort McMurray
Toivanen, Terry[a]	Vice-Chairman Fort McMurray Recreation and Cultural Board	743-8090	
Yacey, Bev	Recreation Administrator Parks and Recreation Town of Fort McMurray	743-1000	a wide range of information of both a historical and current nature, concerning the objectives and priorities of the Fort McMurray Recreation Department

[a] Unavailable at time of contact

12. APPENDIX IV

12.1 ANNOTATED BIBLIOGRAPHY

Burby, R.J. 1976. Recreation and leisure in new communities. New Communities Research Series. University of North Carolina, 1976.

In this study, the effectiveness of recreational service systems is evaluated in terms of the recreational resources provided for community residents, residents participation in recreational activities, and their satisfaction with recreational facilities and services.

Cohos, Evamy and Partners. 1974. The New Town of Fort McMurray; revised general plan. June 1974.

To meet the unprecedented growth in Fort McMurray, a revised General Plan was necessary subsequent to the original plan of 1972. The revised plan establishes a broad framework in areas of housing, transportation, commerce, education, and parks and recreation for development of future facilities and services. Of particular interest are the description of existing recreational facilities and the identification of areas with recreation use potential. Also of value are the recommendations for future parks and recreation development.

Co-West Associates. 1978. Social planning implications for health and social services; northeast Alberta region. Prepared for Northeast Alberta Regional Commission, Government of Alberta, Department of Social Services and Community Health and the Fort McMurray Regional Task Force.

A description of health and social services in northeastern Alberta provides a framework for developing additional services in the light of continued population growth.

An indication of population mobility is provided through demographic and social characteristics, thus providing relevant material concerning labour turnover, the transient nature of population, and government employment.

Department of Advanced Education and Manpower. 1976. Manpower implications of future developments in the Alberta oil sands. Government of Alberta, Department of Advanced Education and Manpower Planning Secretariat.

This study identifies the labour and manpower requirements of potential developments in the Alberta Oil Sands region. Of prime importance is the manpower data concerning Syncrude and GCOS activity.

Department of Energy and Natural Resources. 1978. Athabasca Forest. Five-year recreation plan. Summary, 1978. 50pp.

This report inventories the present outdoor recreation facilities maintained by the Alberta Forestry Service in northeastern Alberta. The document identifies those recreational activities which are the most popular in the Athabasca Forest, determines which existing recreation areas should be expanded and where new facilities should be developed, and outlines a time frame for development and inventory work within the region.

Department of Municipal Affairs. 1972. New Town of Fort McMurray General Plan. Government of Alberta, Department of Municipal Affairs, Provincial Planning Branch.

This plan outlines the form and structure Fort McMurray should follow subsequent to 1970. It provides an analysis of community services and as such offers an adequate level of baseline information for the town prior to 1972.

Department of Municipal Affairs. New Town of Fort McMurray: municipal census. 1977, 1978. Government of Alberta.

The Municipal Census provide a number of relevant demographic material for the Town of Fort McMurray. This includes information on residency status, population by age and sex, dwelling types, vacancy rates, and labour force data according to occupation and place of employment.

Dominion Bureau of Statistics. Census of Canada, 1961, 1966, 1971, 1976. Government of Canada.

The Census of Canada, 1961, 1966, 1971, and 1976, provides demographic information for Fort McMurray and regions for the following areas of interest: population by five-year age groups and sex, family characteristics, dwelling types and tenure, labour force activity, and family and household incomes.

Ekistic Design Consultants Limited. 1975a. An examination of urban growth alternatives in the northeast Alberta region. Prepared for the northeast Alberta Regional Commission.

This study consists of an analysis of regional growth alternatives and an examination to select an appropriate location for future urban development. It, in effect, formulates an urban growth policy for the northeastern Alberta region. The core of the planning framework comprises four industrial development scenarios from which population projections are extrapolated. Conclusions and recommendations emphasize the need for a second urban centre to serve the requirements of foreseeable industrial development in the region.

Ekistic Design Consultants Limited. 1975b. Northeast Alberta regional plan: revised working document on outdoor recreation and tourism in the northeast Alberta region.

This paper attempts to assess the types of tourism and recreational spaces and facilities likely to be required in the region. It also examines present recreational opportunities and determines the types of ancillary developments that are needed. The focus of the report is on outdoor or land-consumptive recreation-tourism facilities.

Ekistic Design Consultants Limited. 1975c. Northeast Alberta regional plan: Anzac, a community profile.

The community of Anzac is examined as to its present socio-economic situation, its existing facilities and services, and its future possibilities and alternatives.

Ekistic Design Consultants Limited. 1975d. Northeast Alberta regional plan: Fort MacKay, a community profile.

This report details the salient characteristics of Fort MacKay. Of interest to the recreation and culture aspect of research are the socio-economic characteristics, including population, economy, social structure and organization, and the existing settlement facilities and service, notably recreation and other public services.

Ekistic Design Consultants Limited. 1975e. Northeast Alberta regional plan: a working document on population projections for the northeast Alberta region.

This study determines population projections for the urban and regional communities in northeast Alberta. It also provides an analysis of present population characteristics of communities in the region.

Ekistic Design Consultants Limited. 1976. A preliminary regional plan for northeast Alberta.

This study provides a framework for the development of northeastern Alberta by examining land use alternatives and determining the optimal use of land for the region. It is a preliminary regional plan outlining: land use opportunities and policy, administrative structure and procedures, the optimal regional development pattern, and an economic development management process. It provides useful information on recommended recreation development patterns and recreation opportunities within the region.

Godbey, Geoffrey. 1978. Recreation, park, and leisure services: foundations organization, administration. W.B. Saunder's Company, Philadelphia. 132 pp.

This study is an introduction to the principal types of organization that provide recreation, park, and leisure services, their roles in society, and the issues which affect the decision-making process of such agencies. Of particular interest are the sections concerned with determining a community's leisure resources, leisure participation patterns and attitudes, and the use of standards.

Harries, Hu and Associates Limited. 1975. The impact of the Syncrude Project on the economy of Alberta. Prepared for Alberta Department of Industry and Commerce.

This report defines the impact, in terms of economy, labour and manpower requirements, and population growth of the Syncrude project on Fort McMurray and its environs. Of particular interest to the recreational and cultural aspects of research are the historical information

regarding basic employment, in the case of GCOS, and the projected manpower requirements and resulting population increases of the Syncrude project.

Kasinska-Banas, B.M. 1978. An approach to social impact research in the Athabasca Oil Sands region. Expanded version of paper delivered at the First Canadian Symposium on Social Impact Assessment, Banff, Alberta.

This study proposes a conceptual guideline for social impact research in resource communities. In doing so, it traces the spectrum of socio-economic developments in the Athabasca Oil Sands region, providing a framework for analytical review of socio-economic impacts. The process records changes in demographic and economic structure and in areas of employment, income, and housing.

Larson, L.E. 1979. The impact of resource development on individual and family well-being. Prepared for Alberta Oil Sands Environmental Research Program by Family Research and Consulting Ltd. AOSERP Project HE 1.2.1. 191 pp.

This document identifies the social issues involved in the relationship between rapid development in the AOSERP study area and family and individual adjustment. Specific content areas include: geographical mobility and adjustment; social impact and family well-being; and resource development and social impact in Fort McMurray and surrounding native communities. Contained within these issues are demographic information on family size and growth rates and a discussion of problems and satisfactions of living in Fort McMurray.

MacKenzie, K.C. Associates Limited. 1977. Fort Chipewyan Community Plan.

The community plan includes an analysis of the existing physical structure of the community and its growth requirements. It also provides a general land use and development framework for the future provision and location of major facilities within the community. The plan identifies opportunities worthy of recreational development and reiterates the recommendations suggested by the Recreation Master Plan.

Matthiasson, J.S. 1970. Resident perceptions of quality of life in resource frontier communities. Centre for Settlement Studies, University of Manitoba, Winnipeg. 35 pp.

This study, through the administration of a questionnaire, evaluates the relative importance of services and facilities related to the quality of life in frontier communities in general, and the perceptions of the adequacy of such services and facilities in Fort McMurray. Services and facilities investigated include: entertainment and recreation, income, housing and accommodation, access to the south, working conditions, communications, retail outlets, and education, medical, and religious institutions.

McVey, Wayne Jr. 1976. Interim report: traditional baseline data system, stage A. Population Research Laboratory, Deparment of Sociology, University of Alberta, Edmonton.

This interim baseline report conducts a review and assessment of existing data sources pertinent to the AOSERP study area. It identifies the census as providing the most detail and completeness of coverage in the AOSERP region.

New Town of Fort McMurray. 1977, 1978. Annual Report.

The annual reports of the Fort McMurray Parks and Recreation Department summarize and evaluate the proceedings of the previous year. They are also helpful in defining areas of responsibility and determining immediate and future priorities.

New Town of Fort McMurray. 1979. Bike and walk in Fort McMurray. Prepared by Fort McMurray Planning Team.

This report outlines a development plan for bicycle and pedestrian ways in Fort McMurray. The document is to be used as a tool for designing, evaluating, and implementing path systems within Fort McMurray.

Nichols, Peter, C. and Associates Ltd. 1979. Overview of local economic development in the Athabasca Oil Sands region since 1961. Prepared for Alberta Oil Sands Environmental Research Program by Peter C. Nichols & Associates Ltd. AOSERP Report 77. 222 pp.

This report examines the economy of the AOSERP study area and traces some of the more important changes that have occurred since major oil sands development began. Particular emphasis is devoted to the Fort McMurray area, where much of the regional economic development has centred. Specific research areas include: regional industrial development, population, employment, housing. incomes and prices, and general impact growth statements.

Northeast Alberta Regional Commission. 1976. Northeast Alberta regional plan: Information base.

The report is structured in two phases: a summary of regional planning factors, consisting of an evaluation of the natural physical base, a land use opportunity

analysis, and a review of existing regional structure; and a series of policy and action recommendations. An outline of regional recreational facilities and opportunities is of particular interest to the leisure services delivery study.

Phillips, W.D. De Pape and L. Ewanyk. 1979. A socio-economic evaluation of the recreational use of fish and wildlife resources in Alberta with particular reference to the Athabasca Oil Sands area. Volume 1:Summary and conclusions. Prepared for the Alberta Oil Sands Environmental Research Program by the University of Alberta, Department of Rural Economy. AOSERP Report 43. 116 pp.

This study assesses the consumptive and noncomsumptive recreational uses of fish and wildlife in the Alberta Oil Sands region and provides important data for fish and wildlife resource management. This includes: determining socio-economic characteristics of participants; identifying activity locations, expenses, and fish species; determining the number of recreational days expended in hunting and fishing; and establishing the value of fish and wildlife resources used for recreational purposes in the Athabasca Oil Sands region.

Professional Environmental Recreation Consultants Limited (PERC). 1976. A five-year parks and recreation master plan. A report to the New Town of Fort McMurray. 21 pp.

The Master Plan is a document of projections in regards to recreational and cultural development within Fort McMurray. It provides a flexible framework for meeting the recreational and cultural needs of the community. Of particular importance is the inventory of leisure resources within the community and the results of a

questionnaire which determined adequacy of opportunities, and residents' priorities concerning future recreational and cultural needs.

Reid, Crowther and Partners Limited. 1973. The impact of a proposed synthetic crude oil project on Fort McMurray. Prepared for Syncrude Canada Ltd. 82 pp.

This report outlines the anticipated social and economic impacts of Syncrude development in terms of demand for housing, commercial and educational facilities on Fort McMurray. The study provides a useful inventory of recreational and cultural facilities, clubs, and organizations in Fort McMurray prior to Syncrude development.

Renewable Resources Consulting Services Limited. 1975. Northeast Alberta regional plan; fishery resources Volume 1 Record assessment. Prepared for Ekistic Design Consultants Limited.

This report offers an evaluation of lake and fishery resources for the Fort McMurray region. Included within the study are a description of fish types and distribution, fishing importance, and management implications for each of the selected areas.

Riffel, J.A. 1975. Quality of life in resource towns. Prepared for the Ministry of State for Urban Affairs, Canada by Centre for Settlement Studies, University of Manitoba, Winnipeg.

This study defines a seven-stage development process of resource towns. For each stage of development, the economic, demographic, and social characteristics are outlined.

Shelley, G.R., and Associates Limited. 1976. Recreation facility comparative analysis. Fort McMurray Recreation Centre.

This study seeks to assess the level of recreation facilities and opportunities available to the residents of Fort McMurray. The report concentrates on the provision of facilities within, or immediately adjacent to, the urban area and includes a comparative analysis of recreational facilties with other medium-sized Alberta communities.

Van Dyke, E.E. 1978. Lives in transition: the Fort MacKay Case. Prepared for the Northeast Alberta Regional Commission by Applied Research Associates Ltd. 170 pp.

This study, in response to the needs of a village which is experiencing increased encroachment by southern resource development, presents a community profile of Fort MacKay. It presents the relevant characteristics of the town and addresses the issues and concerns of significance to the community. Among the issues discussed are community services and infrastructure, economics, and social and political organization. Of importance is the brief but informative section expressing the recreational and cultural desires of several community members.

Van Dyke, E.W. and C. Loberg. 1979. Community studies: Fort McMurray, Anzac, Fort MacKay. Prepared for the Alberta Oil Sands Environmental Research Program by Applied Research Associates Ltd. AOSERP Report 37. 195 pp.

The primary purpose of this study is to develop insights into social and human related problems in the Athabasca Oil Sands area. Extensive interviews with 43 respondents provided information concerning community norms and values, social and personal problems, and satisfaction or dissatisfaction with the quality of life in the communities of the region.

Young, G.M. 1978. Urban alternative, northeast Alberta. Northeast Alberta Regional Commission. 110 pp.

This study represents an attempt to recommend an optimal settlement pattern for projected levels of inmigration as a result of future industrial activity in the region. The analyzed time period is 1978 to 1985. The methodology utilized involves a determination of baseline conditions in Fort McMurray, a calculation of total inmigrations, and an exploration of the need for infrastructure to accommodate the new population, including recreation and culture services.

13. LIST OF AOSERP RESEARCH REPORTS

1.		AOSERP First Annual Report, 1975
2.	AF 4.1.1	Walleye and Goldeye Fisheries Investigations in the Peace-Athabasca Delta--1975
3.	HE 1.1.1	Structure of a Traditional Baseline Data System
4.	VE 2.2	A Preliminary Vegetation Survey of the Alberta Oil Sands Environmental Research Program Study Area
5.	HY 3.1	The Evaluation of Wastewaters from an Oil Sand Extraction Plant
6.		Housing for the North--The Stackwall System
7.	AF 3.1.1	A Synopsis of the Physical and Biological Limnology and Fisheries Programs within the Alberta Oil Sands Area
8.	AF 1.2.1	The Impact of Saline Waters upon Freshwater Biota (A Literature Review and Bibliography)
9.	ME 3.3	Preliminary Investigations into the Magnitude of Fog Occurrence and Associated Problems in the Oil Sands Area
10.	HE 2.1	Development of a Research Design Related to Archaeological Studies in the Athabasca Oil Sands Area
11.	AF 2.2.1	Life Cycles of Some Common Aquatic Insects of the Athabasca River, Alberta
12.	ME 1.7	Very High Resolution Meteorological Satellite Study of Oil Sands Weather: "A Feasibility Study"
13.	ME 2.3.1	Plume Dispersion Measurements from an Oil Sands Extraction Plant, March 1976
14.		
15.	ME 3.4	A Climatology of Low Level Air Trajectories in the Alberta Oil Sands Area
16.	ME 1.6	The Feasibility of a Weather Radar near Fort McMurray, Alberta
17.	AF 2.1.1	A Survey of Baseline Levels of Contaminants in Aquatic Biota of the AOSERP Study Area
18.	HY 1.1	Interim Compilation of Stream Gauging Data to December 1976 for the Alberta Oil Sands Environmental Research Program
19.	ME 4.1	Calculations of Annual Averaged Sulphur Dioxide Concentrations at Ground Level in the AOSERP Study Area
20.	HY 3.1.1	Characterization of Organic Constituents in Waters and Wastewaters of the Athabasca Oil Sands Mining Area
21.		AOSERP Second Annual Report, 1976-77
22.		Alberta Oil Sands Environmental Research Program Interim Report to 1978 covering the period April 1975 to November 1978
23.	AF 1.1.2	Acute Lethality of Mine Depressurization Water on Trout Perch and Rainbow Trout
24.	ME 1.5.2	Air System Winter Field Study in the AOSERP Study Area, February 1977.
25.	ME 3.5.1	Review of Pollutant Transformation Processes Relevant to the Alberta Oil Sands Area

26.	AF 4.5.1	Interim Report on an Intensive Study of the Fish Fauna of the Muskeg River Watershed of Northeastern Alberta
27.	ME 1.5.1	Meteorology and Air Quality Winter Field Study in the AOSERP Study Area, March 1976
28.	VE 2.1	Interim Report on a Soils Inventory in the Athabasca Oil Sands Area
29.	ME 2.2	An Inventory System for Atmospheric Emissions in the AOSERP Study Area
30.	ME 2.1	Ambient Air Quality in the AOSERP Study Area, 1977
31.	VE 2.3	Ecological Habitat Mapping of the AOSERP Study Area: Phase I
32.		AOSERP Third Annual Report, 1977-78
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